ORDER NO. ACED9901183

# Service Manual

## AUTOMOTIVE CONSUMER ELECTRONICS

# CQ-RD320/310LEN

### Cassette Player / RDS Receiver

< CQ-RD320LEN>

## Specifications*

**General**

| | | |
|---|---|---|
| Power Supply | : | DC 12V(11V - 16V), Test Voltage 14.4V Negative Ground |
| Tone Controls | : | Bass; ± 12dB at 100Hz Treble; ± 12dB at 10kHz |
| Current Consumption | : | Less than 2.5A (Tape mode, 0.5W 4-Speaker) |
| Maximum Power Output | : | 40W × 4 (at 4Ω) |
| Power Output | : | 20W × 4 (DIN45 324 at 4Ω) |
| Speaker Impedance | : | 4 - 8Ω |

**FM Stereo Radio**

| | | |
|---|---|---|
| Frequency Range | : | 87.5 - 108MHz |
| Usable Sensitivity | : | 6dBμV (S/N 30dB) |
| Stereo Separation | : | 35dB (at 1kHz) |

**MW Radio**

| | | |
|---|---|---|
| Frequency Range | : | 531 - 1,602kHz |
| Usable Sensitivity | : | 28dB/μV (S/N 20dB) |

**LW Radio**

| | | |
|---|---|---|
| Frequency Range | : | 153 - 279kHz |
| Usable Sensitivity | : | 32dB/μV (S/N 20dB) |

**Cassette Player**

| | | |
|---|---|---|
| Reproduction System | : | 4-track, 2-program stereo |
| Tape Speed | : | 4.76cm/sec. |
| FF/REW Time | : | Less than 110sec. (C-60) |
| Frequency Response | : | 30 - 17,000Hz (Nomal) 30 - 18,000Hz (Metal) |
| Wow and Flutter | : | 0.12% (WRMS) |
| Signal to Noise Radio | : | 52dB |

| | | |
|---|---|---|
| **Dimensions**** | : | 178(W)×50(H)×150(D)mm |
| **Weight**** | : | 1.4kg |

* Specifications and the design are subject to possible modification without notice due to improvements .

** Dimensions and Weight showm are approximate.

**⚠WARNING**

This service information is designed for experienced repair technicians only and is not designed for use by the general public: It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced proffesional technicians. Any attempt to service or repair the product or producs dealt with in this service information by anyone else could result in serious injury or death.

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Panasonic

(Recycled Paper)

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## FEATURES

- 24-Stations Preset (18-FM, 6-AM).
- Radio Data System (PS, AF, CT, PI).
- Electronic Control of Volume, Bass, Treble, Balance and Fader.
- Detachable Face Plate Security.

## FUSE

Be sure to use a fuse of the specified rating (15A) when replacing a blown fuse. Fuses with higher capacity ratings, use of any substitute, or connection without a fuse may result in a fire hazard or damage to the unit.

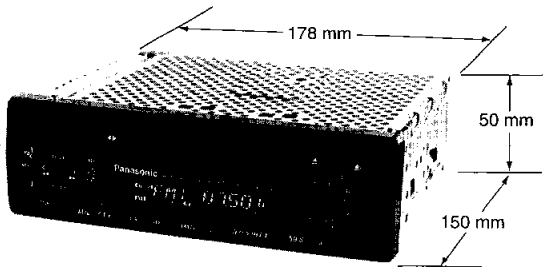
## MAINTENANCE

To clean the exterior of this unit, use a soft cloth to wipe the surface. Do not use benzine, thinner, or any other type of solvents.

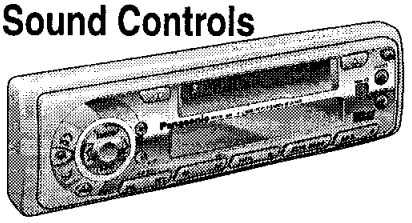
## ALIGNMENT JIG

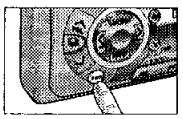
- DOLBY NR ALIGNMENT;
  Test tape : RFKZ0038

## DIMENSIONS



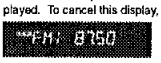
# Power and Sound Controls

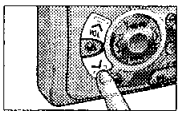




## Power

If the car is not running yet, turn the key in the ignition until the accessory indicator lights.
Press PWR to switch on the power.
Press and hold PWR again to switch off the power.
**Note:** When the power is switched on for the first time, demonstration is displayed. To cancel this display, press D(DISP/CT).

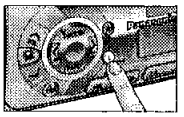




## Volume

Press VOL ˝ or VOL to increase or decrease the volume.

Press VOL ˝ or VOL for more than 0.5 second to sequentially change numeric levels on the display.

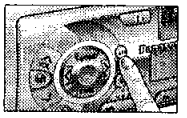


## Tone Enhancement

- Press L(LOUD) to enhance bass and treble tones when listening at low or medium volume.

- Press L(LOUD) again to cancel.

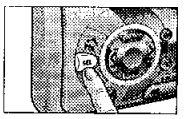
**Note:** This unit is equipped with anti-volume-blast circuit which serves as an automatic volume level adjuster so that you will not be deafened with sudden loud sound.
This system operates as follows. When PWR is first pressed to switch on, the volume level is low. After that, the volume level gradually returns to the level as the same as the one before turning off.
Anti-volume-blast circuit is not effective when the volume level is lower than position 20 at the display.



## Attenuator

- Press ATT to decrease the volume to about 1/10 of the previous level.

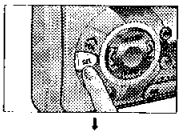
- Press ATT again to cancel.



## Changing Audio Modes

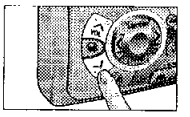
Press SEL to switch the audio mode as follows.

Regular Mode → VOL → BAS → TRE → BAL → FAD



## Bass and Treble

Press SEL to select the BASS (TREBLE) mode. Press VOL ˝ or VOL to increase or decrease the bass (treble) response.



## Balance

Press SEL to select the BALANCE mode. Press VOL ˝ or VOL to shift the sound volume to the right or left speakers.

## Fader

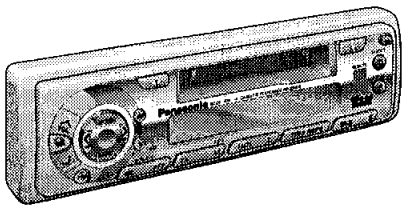
Press SEL to select the FADER mode. Press VOL ˝ or VOL to shift the sound volume to the front or rear speakers.

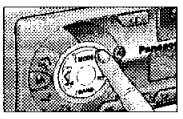
**Note:** When an audio mode (BAS/TRE/BAL/FAD) is selected but no operation is made within 5 seconds (2 seconds at VOL mode), the display will return to the normal operation (Radio, Tape) mode.





# Radio Basics

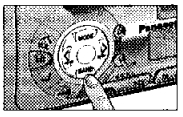




## Changing to Tuner Mode

Press MODE to switch the operation mode as follows.

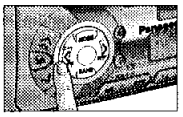
Tuner ⇄ Tape



## Selecting a Band

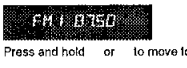
Press BAND to select the bands as follows.
"STEREO" indicator lights if the station is broadcasting in stereo.

FM1 → FM2 → FM3 → AM(LW/MW)

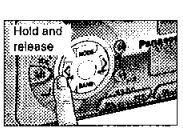


## Manual Tuning

Press ˂ or ˃ to move to a lower or higher frequency.



Press and hold ˂ or ˃ to move to a lower or higher frequency rapidly.

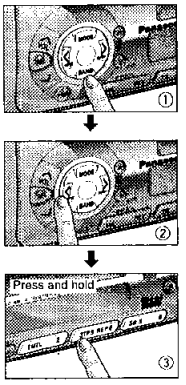



## Seek Tuning

Press and hold ˂ or ˃ for more than 0.5 second, then release.
The radio automatically stops at the next station.

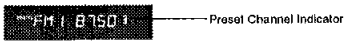
## Preset Station Setting

FM1, FM2, FM3 and AM(LW/MW) can save maximum 6 stations each in their preset station memories.




## Manual Station Preset

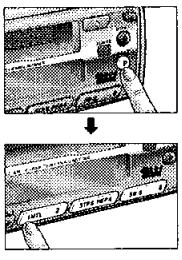
① Press BAND to select a desired band.
② Use manual or seek tuning to find a station that you want to save into the memory.
③ Press and hold one of the station selector buttons 1 to 6 for more than 2 seconds until the display blinks.
Repeat the process to set other stations to from the FM1 to AM bands.




**Note:** You can change the memory setting by repeating the above procedure.

## Tuning in a Preset Station

Press any of the buttons 1 to 6 to tune in the station preset.



## Auto Station Preset

Select a band and press P(AUTO-P).

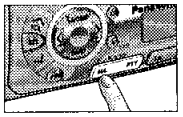
- The 6 strongest available stations will be automatically saved in the memory on preset buttons 1 to 6.
- Once saved, the preset stations are sequentially scanned for 5 seconds each.
- Press an appropriate preset button for the station you want to listen to.

**Caution:** For safety reasons, do not attempt to program while driving.

# Radio Basics continued

## MONO/LOCAL Selection

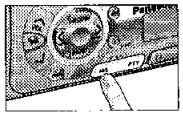
- Much interference is reduced during weak FM stereo broadcasts when MONO is on. (Only for FM mode)
- Searching stops automatically at a strong wave station only when LOCAL is on.



### ① During FM broadcasts

Press M/L(MONO/LOC) to switch the mode as follows.

MONO OFF LOCAL OFF → MONO ON LOCAL OFF → MONO ON LOCAL ON → MONO OFF LOCAL ON



### ② During AM broadcasts

Press M/L(MONO/LOC) to switch on or off the LOC mode as follows.

LOCAL OFF ⟷ LOCAL ON

# RDS (Radio Data System) Reception

Many FM stations are broadcasting added data compatible with RDS. This radio set offers convenient functions using such data.

**AF (Alternative Frequency)**
When receiving condition becomes poor, an RDS station with the same program will be automatically selected.

**EON (Enhanced Other Networks)**
When EON data is received, the EON indicator lights and the TA and AF functions are expanded.
TA: Traffic information from not only the station now tuned in to but also other stations of the same network can be received.
AF: The frequency list of the RDS stations preset by received EON data is updated.

**PS (Program Service Name)**
When an RDS station is received, the RDS indicator lights and automatically displays the name of that station instead of the frequency. When D(DISP/CT) is pressed during PS display, the frequency is displayed for 3 seconds, then PS display resumes.

**PI (Program Identification)**
If a preset RDS station is poor in receiving condition when it is selected, the automatic seek (PI Seek) starts to seek the same program and tunes in to it.

**PTY (Program Type)**
Program type identification signal
**Example :** News, rock, classical music, etc.

**TA (Traffic Announcement)**
When an FM station that periodically provides the latest traffic information is received, the TP indicator lights. If TA ON is set, FM traffic information automatically interrupts your listening to a tape source until it ends, then you will listen again to whatever you have been listening to.

**Best Station Research**
If a preset RDS station is in poor condition of reception when you try to tune in to it, the best frequency is selected from the AF list of the station.

**REG(Region)**
The AF, Best Station Research, PI Seek functions will be as follows:
**REG ON** : The frequency changes only with the same regional program. This function is mainly used while driving in the same area, for example, in a city.
**REG OFF**: The frequency changes even with a different regional program if the station is in the same network. The broadcast may be different depending on the case. This function is mainly used when driving far from one region to another.

**WHAT PROVIDES EON CAPABILITIES**
EON lets the radio set take advantage of RDS information much more than before. It constantly updates the AF list of all presets, including the station currently tuned in to. So, even if you change preset far from home, you will be able to receive the same station at an alternative frequency, or another station serving the same program if any. EON also keeps track of locally available TP stations for quick reception.

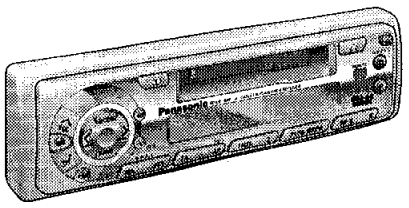
**Note:** When you're in "AF ON" mode, auto preset memory only works for RDS station. When in "TA on" mode, it only works for TPstations. To make auto preset for ordinary stations, cancel AF mode and switch to TA off in advance.

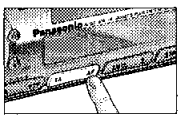




# RDS (Radio Data System) Reception continued

## A. Basic Operation in RDS Reception (PS, AF, CT, PI)

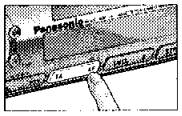




## RDS Reception

Press AF when receiving a station in the FM1, FM2 or FM3 band.
- The operating mode changes to AF ON or AF OFF, respectively.

- Select AF ON if you wish to use the AF network of an RDS station. Best Station Research is activated at the same time.
- Select AF OFF if the AF network of an RDS station is not necessary.



## Changing AF Mode

Press AF to change AF ON and activate Best Station Research at the same time. (3 seconds maximum)

.....AF 1 Mode

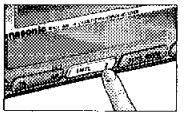
.....AF 2 Mode

.....AF OFF Mode

**Note:**
1. Default mode is AF1.
2. AF1 has a low level of AF operating sensitivity in urban areas. Therefore, AF does not frequently operate even if sensitivity is temporarily lowered between skyscrapers, for example.
3. AF2 is for suburban areas with a higher level of sensitivity than AF1.



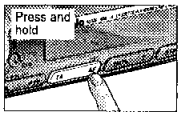
For Seek Tuning, RDS Station Preset, Tuning in a RDS preset station, and Auto RDS Station Preset, please refer to Radio Basics (Page 20 to 22).



## RDS Seek Tuning (PI seek)

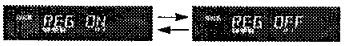
The PI seek function may be used if an RDS station selected from the memory is poor in receiving condition. Press the preset button again for the station tuned in to.

**PI Seek:** If Best Station Research fails in selecting the best station, the PI seek function operates to automatically tune in to the same program.

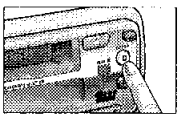



## Region (REG) Switching

Press and hold AF(REG) for more than 2 seconds in AF mode to alternately select between REG ON and REG OFF.



**Note:**
If you wish to stay with the same program, keep REG ON. If you keep REG OFF, there is a higher possibility of returning in to an AF station in better receiving condition.
The relationship of the PI seek function with REG ON and REG OFF is as described above.



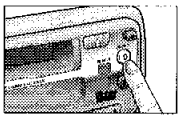
## Changing Display

Press D(DISP/CT) to change the display as follows.
(Frequency display continues for only 3 seconds, returning to PS display after that.)

PS display → Frequency display → CT display → (3 seconds) → PS display

## Clock Time (CT) System

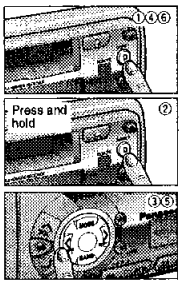
The CT (24-hour) system may not properly operate in areas where RDS CT service is not available. Once CT service is received, the CT system keeps operating. "NO CT" is displayed in areas where no CT service is available.



## Clock Display

Press D(DISP/CT) to indicate the clock display.

# RDS (Radio Data System) Reception continued



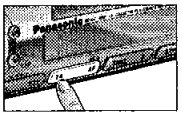

## Initial Time Setting

**Press BAND to change to AM mode.**

① Press D(DISP/CT), "NO CT " is displayed.
② Press and hold D(DISP/CT) again for more than 2 seconds, "hours" blinks indicating the time setting mode is activated.
③ Press or to set the hours (24 hours).
④ Press D(DISP/CT) again for minutes setting.
⑤ Press or to set the minutes.
Hold or change numbers rapidly.
⑥ After setting the time, press D(DISP/CT).

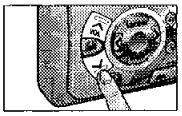
**Note:**
- If CT display is kept on, it remains on even if PWR and ACC are turned off and back on again.
- In other modes, press D(DISP/CT) to get RDS CT-service.

## B. TP Reception



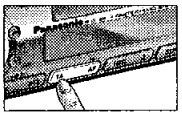
### Selecting Traffic Information (TA on) Mode

Press TA to switch on and keep it there when you wish to listen to the traffic information. Press TA again to switch off.



### Volume Setting (Only for Tape TA on mode)

Adjust the volume as desired using "VOL " or "VOL " while receiving traffic announcement. (TA)
After setting the volume for traffic announcement (TA), the difference between normal volume and TA volume is automatically saved in the memory (up to 5 levels) so that next traffic information will be received at the preceding TA volume which may be higher or lower than normal volume.
Normal volume can be changed up to 5 levels upward or downward.
If an adjusted volume level is over 40 or less than 0, any further change will not be made.

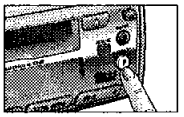


### When Receiving a Station other than TP Station (including EON stations)

A traffic information station is automatically searched for and the radio automatically stops at the next available TP station. EON Capabilities:
EON lets the radio take advantage of much more RDS information than before. It constantly updates the AF lists for all switch presets far from home, you will receive an alternative frequency for the same station, or another station carrying the same program, when such exists. EON also keeps track of locally available TP station.

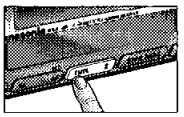
## TP Seek Tuning

Press or for more than 0.5 second, then release. The radio automatically stops at the next available TP station.



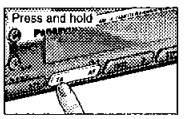
## Auto TP Station Preset

Press P(AUTO-P) until the display blinks in TA on. The six strongest available TP stations are automatically saved in the memory on the preset buttons 1 to 6.
Once saved, the preset stations are sequentially scanned for 5 seconds each.



## Tuning in a TP Station Preset

Press any of the preset buttons 1 to 6 that you want to listen to. Best Station Research function is activated to automatically select the strongest available frequency for the TP station (through the built-in frequency) lists, if reception is weak.




## Muting TA on

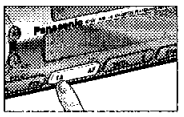
Press and hold TA for more than 2 seconds to light "TA on".
Then Traffic Announcement (TA) function is activated to operate, allowing you to listen to only Traffic Program whenever it is available.

### Muting TA on canceling (Muting TA on ¤ TA on)

Press TA again.
Press VOL to increase the volume level.

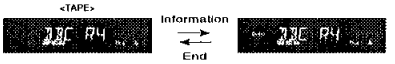
## TP Auto Search

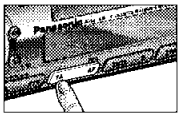
If receiving condition is poor when TA is on during muting and if there is no other alternative frequency in the same network, a traffic announcement station in good receiving condition is automatically searched for.



## Tape TA on

Press TA during tape mode.
When TA on mode is selected while listening to the source in that mode, wait for Traffic Announcement to begin.



## Switching to TA off Mode

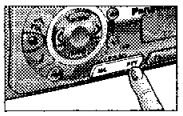
Select either one of the following steps.
- Press TA when TA is on.
- Press and hold TA for more than 2 seconds when Muting TA is on.
- Press TA when tape TA is on.



# RDS (Radio Data System) Reception continued

## C. PTY Reception

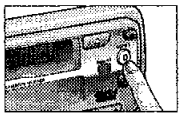
(There are some areas where PTY service may not be available.)



## Switching to PTY Mode

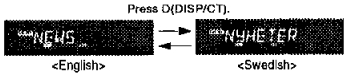
Press PTY to select PTY display mode, and the PTY of the broadcast received is displayed.

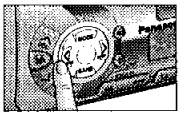
"NO PTY " is displayed if there is no corresponding program type.



## Changing PTY Display Language

Press D(DISP/CT) in PTY mode to alternate the language between English and Swedish.



## Program Type Selection

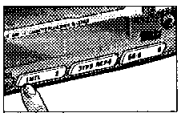
Press or to select the program type as follows.

SPEECH - MUSIC - NEWS - AFFAIRS - INFO - SPORT - EDUCATE - DRAMA
ROCK M - POP M - VARIED - SCIENCE - CULTURES
M.O.R.M - LIGHT M - CLASSICS - OTHER M - WEATHER - FINANCE
LEISURE - TRAVEL - PHONE IN - RELIGION - SOCIAL A - CHILDREN
JAZZ - COUNTRY - NATIONAL - OLDIES - FOLK M - DOCUMENT

When the desired selection has been made, press BAND. Then automatic seek will start to tune in to the station broadcasting the selected program type.

**Note :**
Seek tuning does not operate as long as "NO PTY" is displayed.



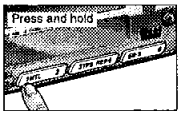


### TABLE of PTY CODE and Program Type

Press any of the preset buttons 1 to 6 that you want to desire the program type. Those buttons already have the program types as follows. (Default)

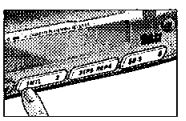
**<PRESET PTY>**

| Preset NO. | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| Program Type | NEWS | SPEECH | SPORTS | POP MUSIC | CLASSICS | MUSIC |
| Display | | | | | | |
| | NEWS | AFFAIRS<br>INFO<br>EDUCATE<br>DRAMA<br>CULTURES<br>SCIENCE<br>VARIED<br>WEATHER<br>FINANCE<br>CHILDREN<br>SOCIAL A<br>RELIGION<br>PHONE IN<br>TRAVEL<br>LEISURE<br>DOCUMENT | SPORTS | POP M | CLASSICS | ROCK M<br>M.O.R.M<br>LIGHT M<br>OTHER M<br>JAZZ<br>COUNTRY<br>NATIONAL<br>OLDIES<br>FOLK M |




## Program Type Preset

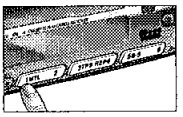
Press and hold one of the buttons 1 to 6 for more than 2 seconds to preset the desired program type selection in the button.



## Tuning in a PTY Preset Station

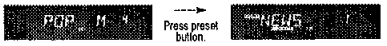
Press any of the preset buttons 1 to 6 that you want to listen to.

# RDS (Radio Data System) Reception continued



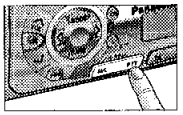
## Searching for PTY

① Select the desired station from preset number buttons 1 to 6. Then, the preset PTY and that preset number are displayed for 5 seconds.




② While the desired type from 6 presets is displayed, take either of the following two steps.
A) Press the same preset button again.
B) Press BAND.
If the desired PTY station is available, it is directly received. If it is not, "NO PTY" blinks and the radio returns to the station that was received before the search.

Press the same button again to cancel.



## Canceling of PTY Mode

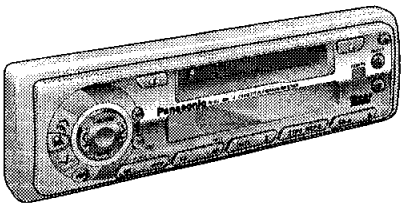
Press PTY to cancel.
The set returns to the state existing before PTY mode while the receiving frequency remains unchanged.

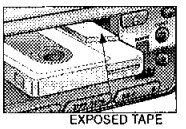
## Emergency Announcement Reception

(Some areas are not covered by emergency announcement service.)
If an emergency announcement is broadcast in tape mode, the radio is automatically selected to receive the emergency announcement. "ALARM" blinks.



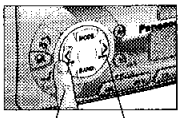
# Cassette Tape Player Basics





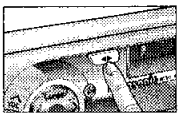

## Loading a Cassette

Insert a cassette with the exposed tape side facing to the right. Gently push the cassette in until the mechanism captures it. Then the cassette is loaded in place and playback starts.

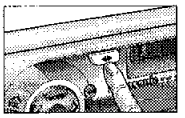



## Rewind and Fast Forward

Press ◄◄ or ►► to rewind or fast forward the tape.



Press ◄► to stop.



## Changing Sides

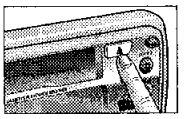
Press ◄► to reverse.

TOP SIDE PLAYING

BOTTOM SIDE PLAYING



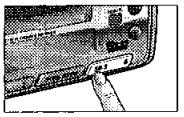
# Cassette Tape Player Basics continued



## Ejecting a Tape

Press ▲ to eject a cassette tape, and the previous operation mode will resume.

**Note:**
- If power is switched off before ▲ is pressed, the cassette will not be ejected. Switch on the power again and press ▲ to eject the cassette.
- The cassette tape should be always removed from the cassette slot when not in use.

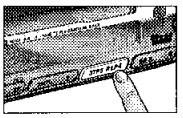


## Blank Skip

- Press 5 (B·S) to skip long unrecorded portions on the tape.

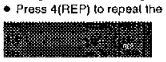
- Press 5 (B·S) again to cancel.

**Note:**
- "B SKIP" indicator lights. However, the blank skip operation will not work if REP is on. The repeat function has priority over the blank skip function.
- Also the blank skip operation will not work when the unrecorded portions of the tape is less than 15 seconds.

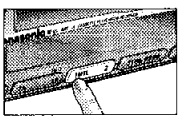


## Repeat Play

- Press 4(REP) to repeat the music you are listening to.

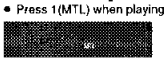


- Press 4(REP) again to cancel.



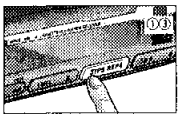
## Metal Tape Mode

- Press 1(MTL) when playing metal or chromium dioxide ($CrO_2$) tapes.

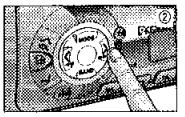


- Press 1(MTL) again to cancel.

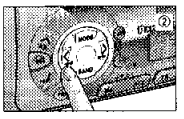
**Note:** Playing non-metal tapes in MTL mode causes high frequency imbalance, which affects tone quality.



↓



or



## TPS Operation (Tape Program Search)

① Press 3(TPS) to activate the Tape Program Seach mode.

② From the current selection, decide which program you want to select. Now, press ►► several times forward (up to 9 programs) or press ◄◄ several times backward (up to 8) to select the corresponding program number.

(Fast forward:) 1 ----------▶ 9
(Rewind:) 0 ----------▶ 8

EX1. To select the current program again press 3(TPS), and press ◄◄ once.

EX2. To select the 1st program backward of the current selection, press 3(TPS) once, and press ◄◄ twice.

EX3. To select the next program, press 3(TPS) and press ►► once.

EX4. To select the 3rd program forward of the current selection, press 3(TPS) once, and press ►► three times.

③ Press 3(TPS) again to cancel.

**Note:**
The TPS mode may not work correctly in the following cases. This, however, does not mean that the unit is defective.
- There is an interval less than 3 seconds or having a high level of noise or hum between programs.
- There is particularly low-level passage during the program.

**Note:** To maintain your cassette player in top condition, avoid using tapes that are longer than 90 minutes (C-90).

**"For Inserting a Cassette Tape"**
If you insert into the unit a cassette with a loose tape caused by forcing it into cassette with a finger or the like, the cassette may not be properly reproduced. In such a case, eject the cassette, make the tape tight, then insert it back into the deck.

# Remote Control Basics

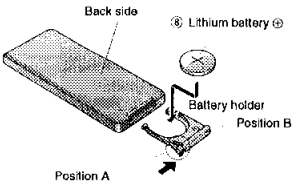
**(Only for CQ-RD320LEN)**

## Battery Replacement:

**1. Remove the battery holder.**
Pull the holder by the Position B while pushing Position A in the direction indicated by the arrow.

**2. Replace the battery.**
Set a new battery properly with (+)side up as illustrated.

**3. Insert the battery holder.**
Push in the holder to the original position.



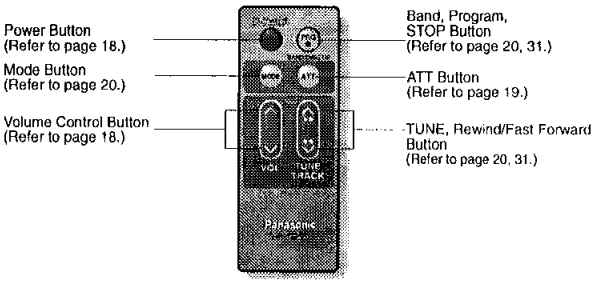

## Note on Batteries:

Old batteries must be immediately removed and disposed.
Battery Information:
- Designated Battery: Panasonic Lithium Battery (CR2025)
- Battery Life: 6 months with normal use (in normal room temperature)

**Caution:**
Improper use of batteries may cause overheating, explosion or ignition, resulting in injury or fire.
Battery leakage may cause damage to the unit.

- Do not disassemble or short the batteries. Do not throw the batteries into a fire.
- To avoid the risk of accident, keep the batteries out of reach of children.

## Names of Main Controls :






# Anti-Theft System

This unit is equipped with a removable face plate. By removing this face plate, the radio becomes totally inoperable. The security indicator will blink.

### To Remove the Removable Face Plate

① Switch off the power.

② Press the release button (⏏). The removable face plate will be released.

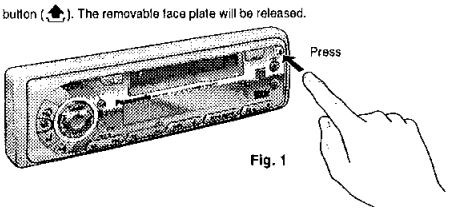



Fig. 1

③ Remove the removable face plate by pulling on the right side of the unit. Place the removable face plate in a supplied case.

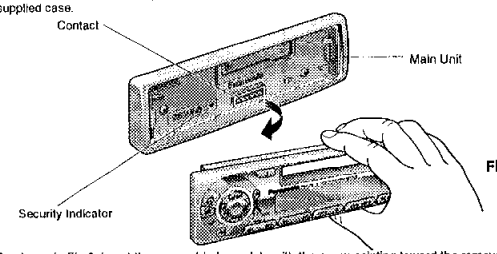



Fig. 2

④ As shown in Fig.3, insert the removable face plate with the arrow pointing toward the removable face plate case until you hear a "click". Keep the removable face plate in the case. Then, you can bring the plate safely.

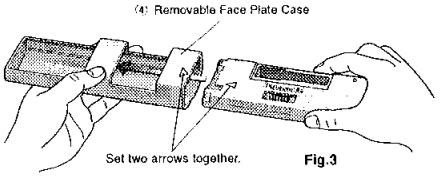



Fig.3



# Anti-Theft System continued

### To Install the Removable Face Plate

① Slide the left side of the removable face plate in place.

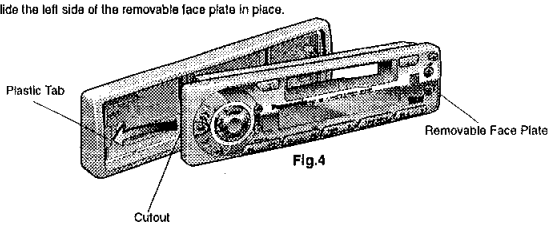



Fig.4

② Press the right end of the removable face plate until "click" is heard.

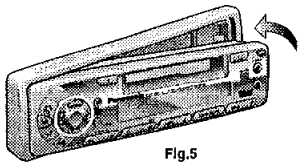


Fig.5

**Caution:**
1. Before removing the removable face plate, make sure the power is off.
2. This removable face plate is not water-proof. Do not expose it to water or excessive moisture.
3. Do not remove the removable face plate while driving your car.
4. Do not place the removable face plate on the dashboard or nearby areas where the temperature rises to high levels.
5. Do not touch the contacts on the removable face plate or on the main unit because this may result in poor electrical contacts.
6. If dirt or other foreign substances get on the contacts, wipe them with clean and dry cloth.

### Security Indicator

The security indicator blinks when the removable face plate is removed from the unit.

### Activate Security Indicator

1. Press and hold SEL for more than 2 seconds when the power is on. "LED ON" is displayed, and the security indicator turns on.

(Default: The security indicator is off.)

2. To check whether the unit is set in the LED ON mode, make sure that the security indicator blinks when the removable face plate is removed.

| Display | Security Indicator | Panel Removal Alarm |
|---|---|---|
| LED ON | Blinks | ON |
| | (Press and hold SEL for more than 2 seconds.) | |
| LED OFF | OFF | OFF |

## Panel Removal Alarm

This alarm sounds to warn you not to forget to remove the panel before leaving your car. This function is activated when the security alarm is on.

# Installation

## Preparation

- Before installation, check the radio operation with antenna and speakers.
- Disconnect the cable from the negative (–) battery terminal (see caution below).
- The unit should be installed in a horizontal position with the front end up at a convenient angle, but not more than 30 .

**Caution:**
For installation to cars with trip or navigational computers, all electronic memory settings previously registered in the computer will be lost when the battery terminal is disconnected. For this type of car, battery could not be disconnected. Therefore, extra care should be taken to prevent short circuitting.

## In-dash Installation

**Installation Opening**
In-dash installation can be done if the car's dashboard has an opening for this unit as shown in Fig.
1. The car's dashboard should have a thickness of 4.5mm - 6mm in order to make the installation of the unit.

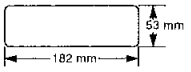


Fig. 1

## Installation Precautions

This equipment, if possible, should be installed by a professional installer.

In case of difficulty, please consult your nearest authorized Panasonic Service Center.
1. This system is to be used only in a 12-volt, DC battery system (car) with negative ground.
2. Follow the electrical connection on page 41 carefully. Failure to do so may result in damage to the unit.
3. Connect the power lead after other connections are made.
4. Be sure to connect the YELLOW lead to the positive terminal (+) of the battery or fuse block (BAT) terminal.
5. Insulate all exposed wires to prevent short circuitting.
6. Secure all loose wires after installing the unit.
7. Please carefully read the operating and installation instructions of the respective equipment before connecting it to this unit.

## Supplied Hardwares

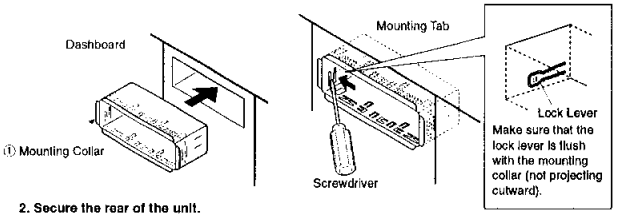
| No. | Item | Diagram | Q'ty |
|---|---|---|---|
| ① | Mounting Collar | | 1 |
| ② | Mounting Bolt (5 mmΦ) | | 1 |
| ③ | Power Connector | | 1 |
| ④ | Removable Face Plate Case | | 1 |

| No. | Item | Diagram | Q'ty |
|---|---|---|---|
| ⑤ | ISO Antena Adaptor | | 1 |
| ⑥ | Dismounting Plate | | 1 |
| ⑦ | Remote Control (only for CQ-RD320LEN) | | 1 |
| ⑧ | Lithium Battery (only for CQ-RD320LEN) | | 1 |

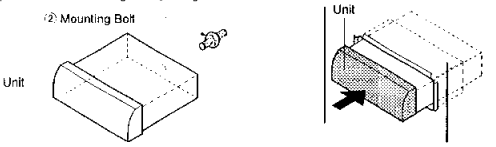


## Installation Procedures

**1. Secure the Mounting Collar ①.**
Insert Mounting Collar ① into the car's dashboard, and bend mounting tabs out with a screwdriver.


Dashboard
① Mounting Collar
Mounting Tab
Screwdriver
Lock Lever
Make sure that the lock lever is flush with the mounting collar (not projecting cutward).

**2. Secure the rear of the unit.**
a) Check the electrical connection by referring to this operating instructions.
b) Connect the Mounting Bolt ② using a suitable wrench.



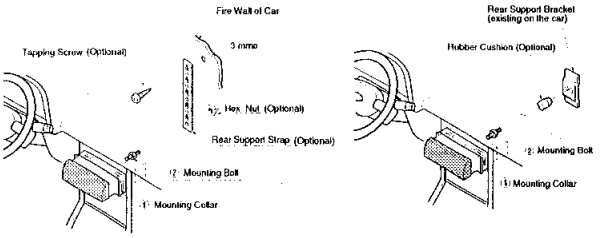

c) Insert the unit into Mounting Collar ① and push it in until "click" is heard.
d) Secure the rear of the unit to the car by either of the two recommended methods.

### Using the Rear Support Strap (Optional)

Affix one end of the Rear Support Strap to the rear of the unit, and the other end to the Fire Wall of car, or some other metallic area.

### Using the Rubber Cushion (Optional)

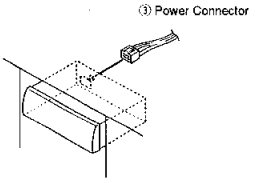
(If there is an existing Rear Support Bracket on the Fire Wall of car.)
Cover Mounting Bolt ② on the rear of the unit with Rubber Cushion (Optional), and mount it into the existing Rear Support Bracket.






# Installation continued

**3. Plug the Power Connector ③.**

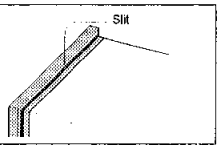



**4. After installation reconnect the negative ( ) battery terminal.**

### To remove the trim plate (for Japanese Cars)

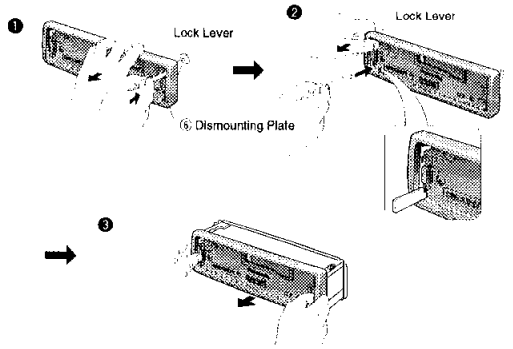
You may not be able to install this unit in some makes of Japanese cars. In such a case, consult your dealer.

To mount this unit on a Japanese car, first cut the 9 slits in back of the trim plate with side-cut pliers, remove the trim plate, then mount this unit.




### To Remove the Unit

a) Remove the removable face plate. (See page 35.)
b) Pull out the unit while pushing the lock lever using Dismounting Plate ⑥.
c) Remove the unit pulling with both hands.

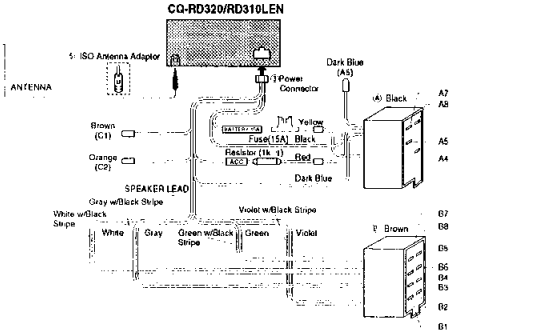



**Note:** Do not lose the Dismounting Plate. It will be needed to remove the unit from the car's dashboard.



# Electrical Connection

**Caution:**
- Confirm the note on page 4, and make connections to the connectors on car side.
- To prevent damage to the unit, be sure to follow the connection diagram below.
- Remove the covering of the leads about 5 mm long from their end before connecting. (the cords except for ISO connector's cords).
- Do not insert the power connector into the unit until the wiring is completed.
- Be sure to insulate any exposed wires from a possible short-circuit (from the car chassis. Bundle all cables and keep cable terminals free from touching any metal parts.




### Loudspeakers (connector B)

| | Left + | Left – | Right + | Right – |
|---|---|---|---|---|
| Front | B5 (White) | B6 (White w/Black Stripe) | B3 (Gray) | B4 (Gray w/Black Stripe) |
| Rear | B7 (Green) | B8 (Green w/Black Stripe) | B1 (Violet) | B2 (Violet w/Black Stripe) |

A4
**BATTERY LEAD** (To Battery of Car) (Yellow)
Connect to the "BAT" terminal on the fuse block of the car. The power should be supplied continuously to the yellow leads regardless of the on/off position of the ignition key.

A5
**MOTOR ANTENNA RELAY CONTROL LEAD** (Dark Blue)
(To Motor Antenna) (Max. 500mA)
This lead is not intended for use with switch actuated power antenna.
**AMP-RELAY CONTROL POWER LEAD**
This lead is for connection to Panasonic power amplifier.

A7
**POWER LEAD** (Red)
Connect to the "radio" power line of the car or to the "IGN" or "ACC" terminal of the fuse block.

A8
**GROUND LEAD** (Black)
Connect to a well grounded metallic part of your car.

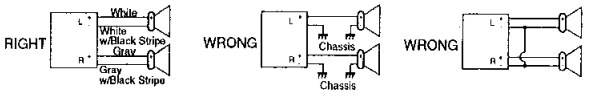
C1
**Not Used**

C2
**TELEPHONE MUTE LEAD** (Orange)
(To car telephone mute line)
TELEPHONE MUTE
The telephone mute lead, if connected to the car telephone mute line, will activate the muting circuit and the sound from the speakers cannot be heard while the telephone conversation is in progress.
**Note** This telephone mute lead is for connection only to the radio mute line. Be sure to ascertain this because it will not work with other type of output system.

# Speaker Connections

**Caution:**
1. Use ungrounded speakers only.
2. The speakers to be used with this unit should be able to handle more than 40W of audio power. If an optional amplifier is used, the speakers should be able to handle the maximum output power of the amplifier. Use of speakers with small input ratings can cause damage to the speakers.
3. The speaker impedance should be 4 - 8 ohms. If the impedance is too large or too small, it affects the output and may cause damage to the speakers or this unit.
4. Do not use 3-wire type speaker system having a common earth lead. Never connect the speaker cord to the body of the car. This unit uses the BTCL circuit, so each speaker should be connected separately using parallel vinyl insulated cords.
5. The speaker cords and the power amplifier unit should be kept away (about 30cm apart) from the antenna and antenna extension cord.
6. Follow the connection diagram below carefully. Failure to do so may cause damage to both unit and speakers.

- **Unit will be damaged if speakers (Front, Rear) are not connected properly.**



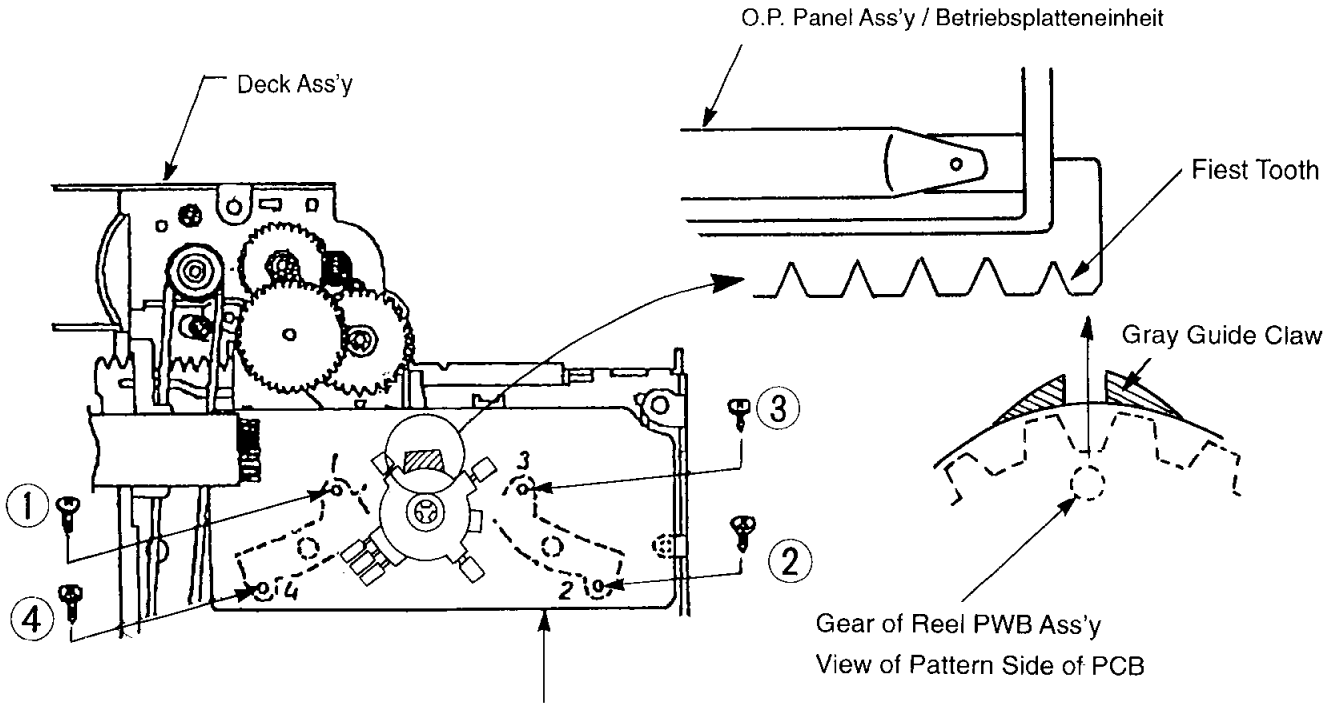

- **Do not connect more than one speaker to one set of speaker leads.**

## RE-ASSEMBLY PROCEDURE for REEL PWB ASS'Y

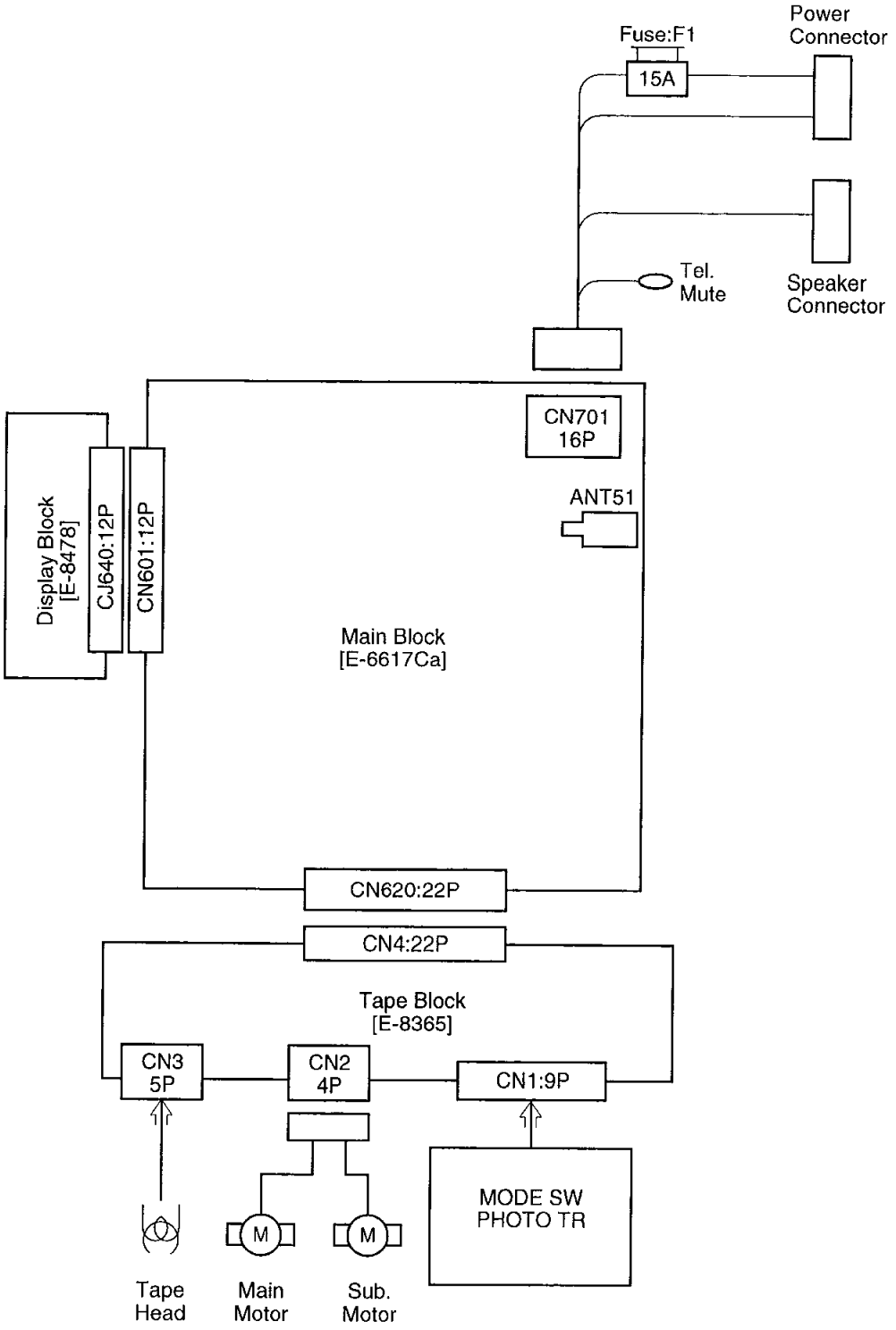
- When you re-assembly the REEL PWB Ass'y please refer to the following procedure.

1. Set the gear of Reel PWB Ass'y (Ref. No.61) into the first tooth of O.P. Plate Ass'y (Ref.No.20) as shown below.

2. Tighte the (1-4) screws of reel PWB Ass'y as shpwn in the figure.



# WIRING CONNECTION

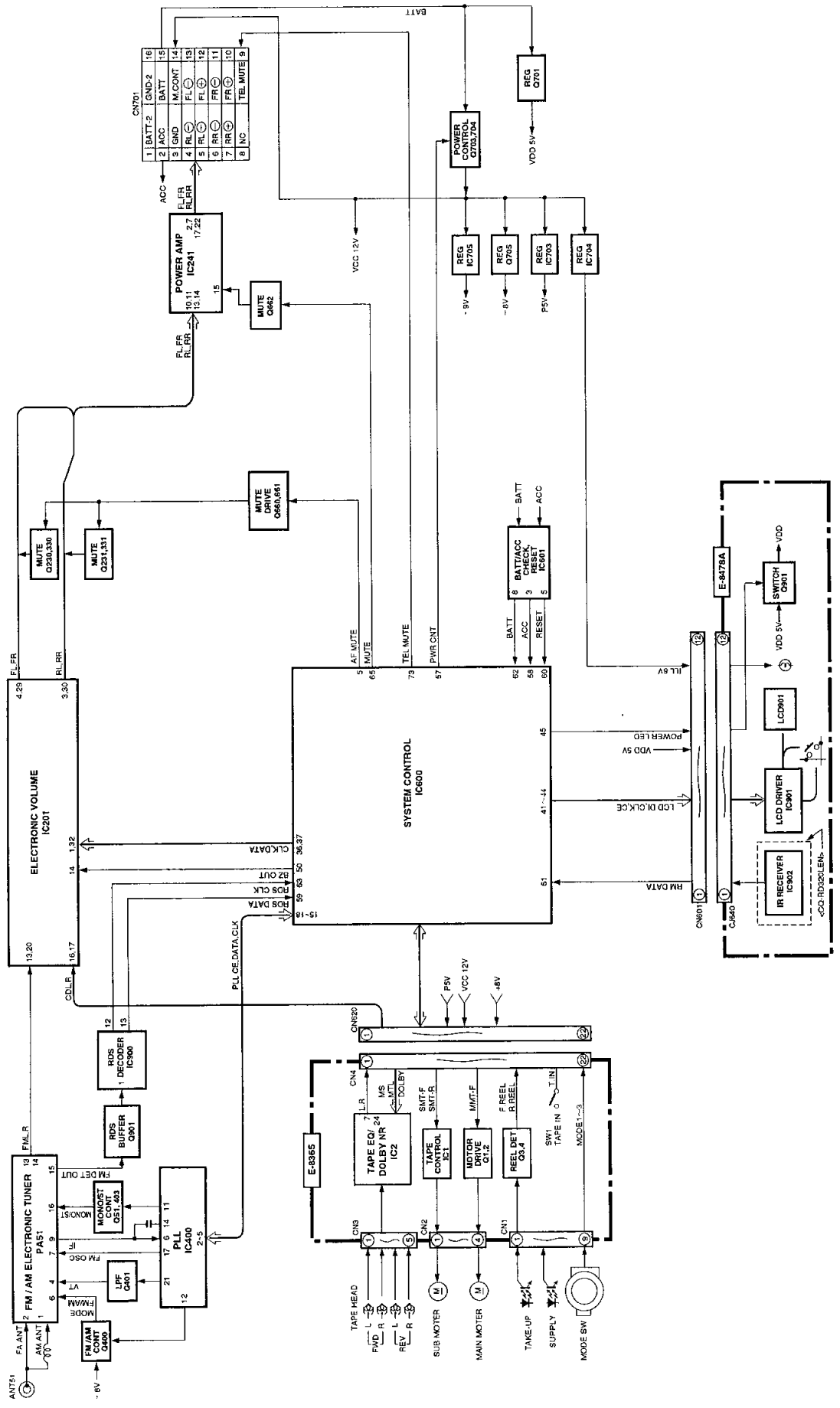



**<Note> :**

[ ] .....This mark shows a Ref. No. of connector

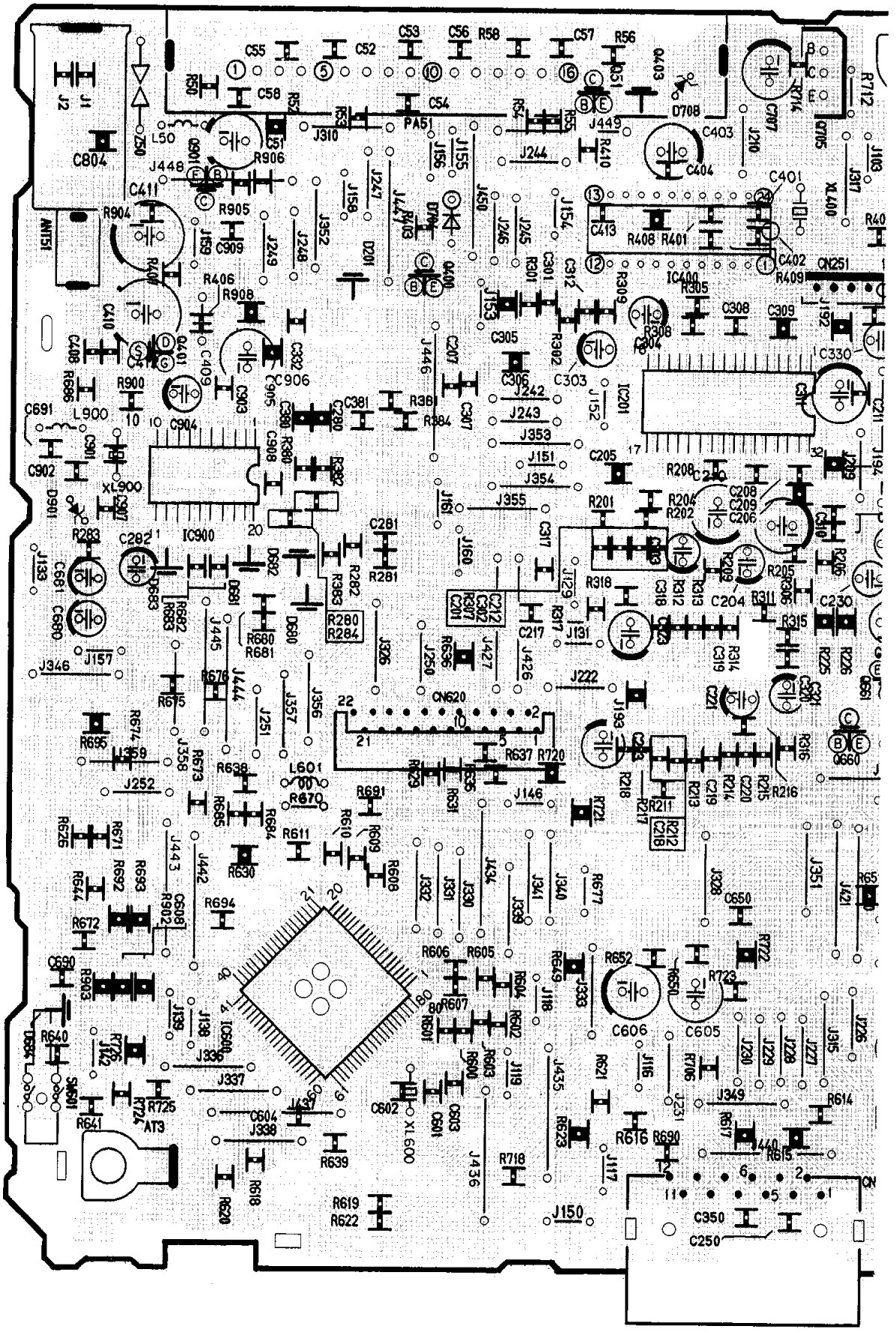
[ ] .....This mark shows a mounting position of connector.

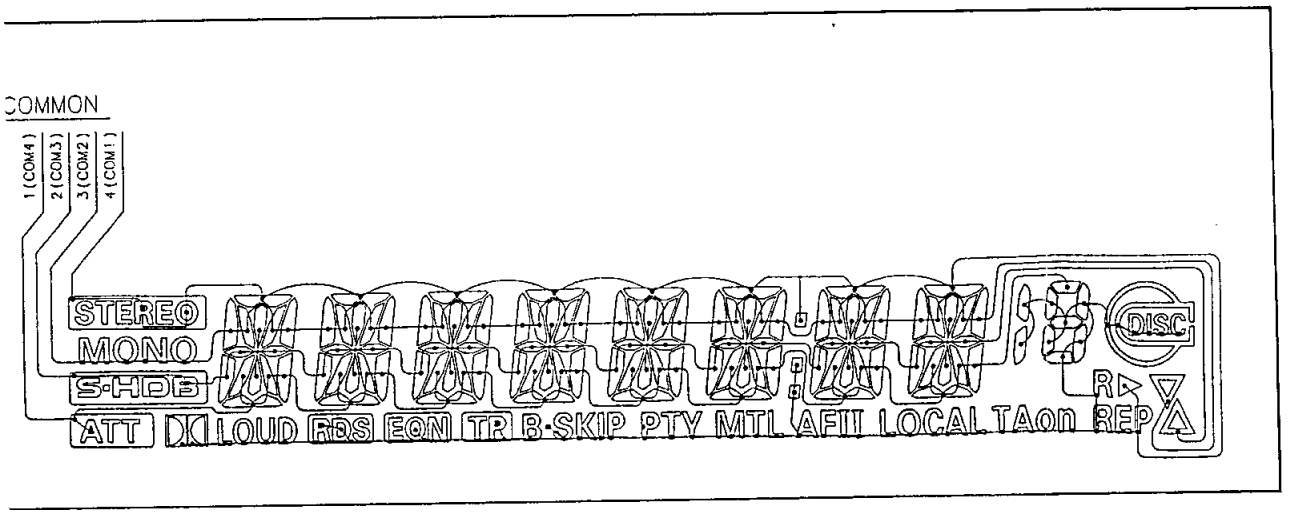
# BLOCK DIAGRAM MODELS CQ-RD320/310LEN



# WIRING DIAGRAM (Main Block) MODELS CQ-RD320/310LEN

[E-6617Ca]

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2(COM3)
3(COM2)
4(COM1)
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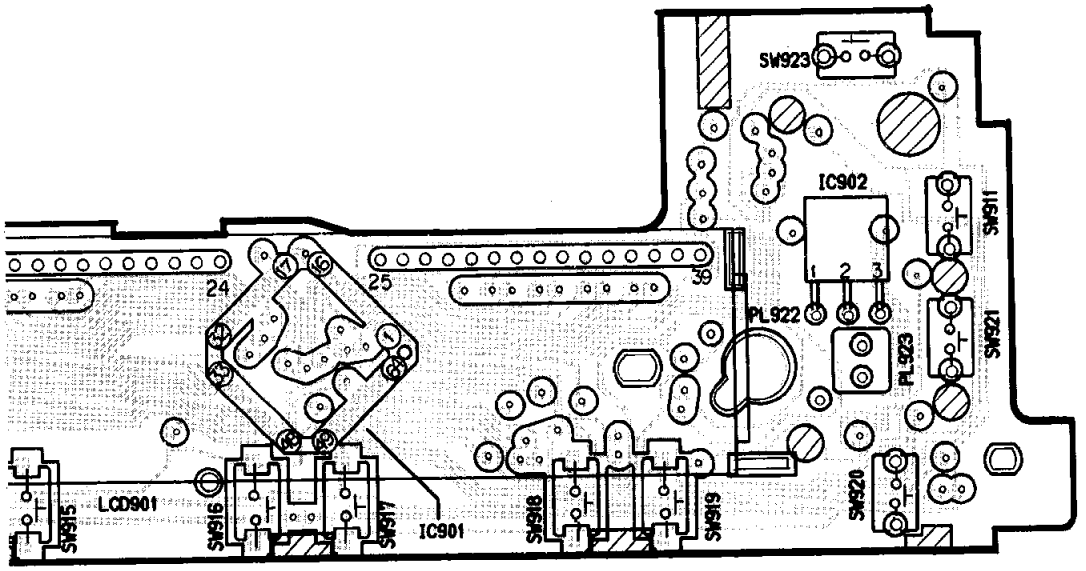
MONO
S-HDB
ATT
LOUD
RDS
EQN
TR
B-SKIP
PTY
MTL
AFII
LOCAL
TAon
REP
DISC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IC902
SW911
SW921
PL922
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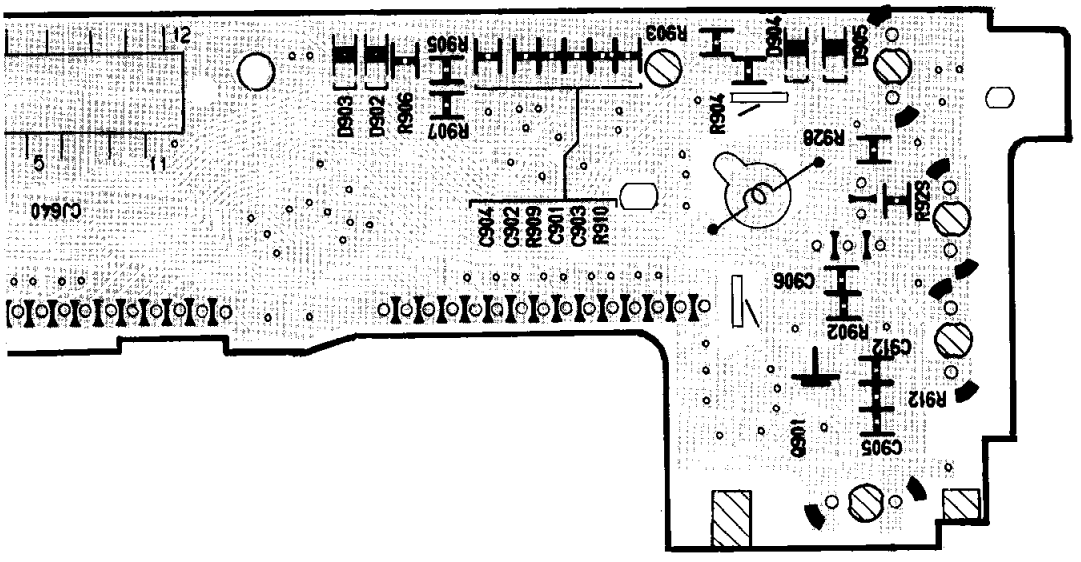
SW915
LCD901
SW916
SW917
IC901
SW918
SW919
24
25
39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C905
C901

# WIRING DIAGRAM (Display Block) MODELS CQ-RD320/310LEN

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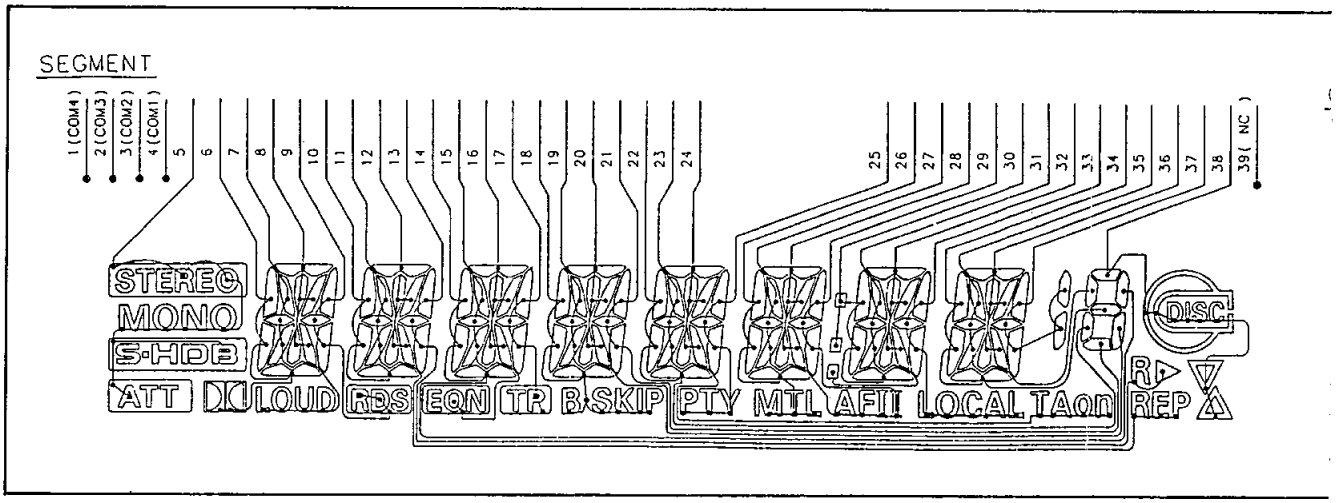
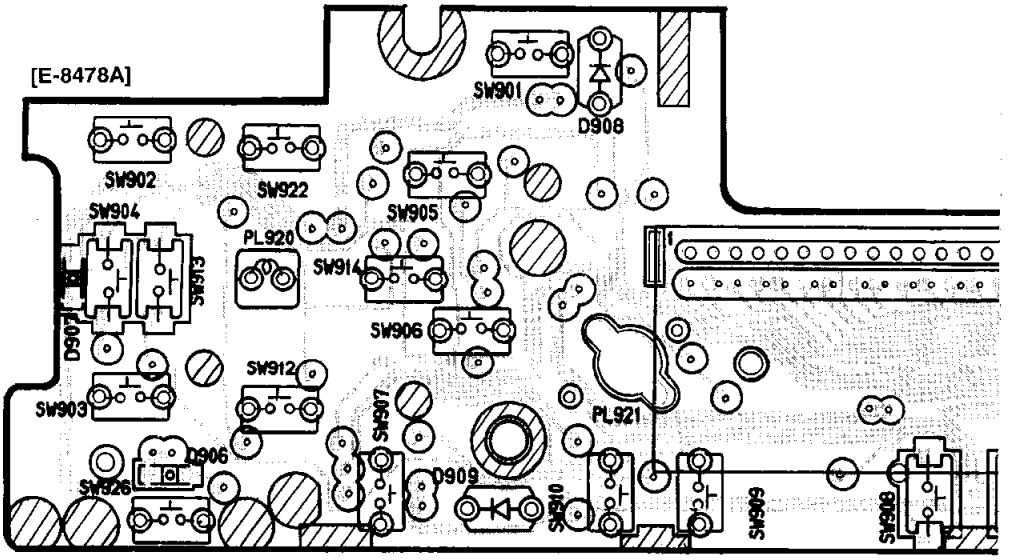
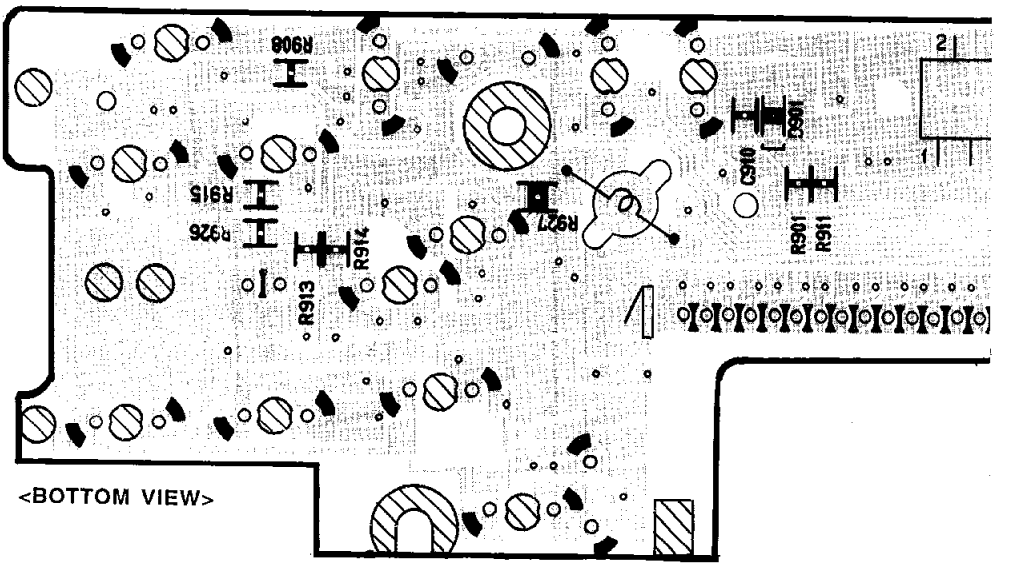
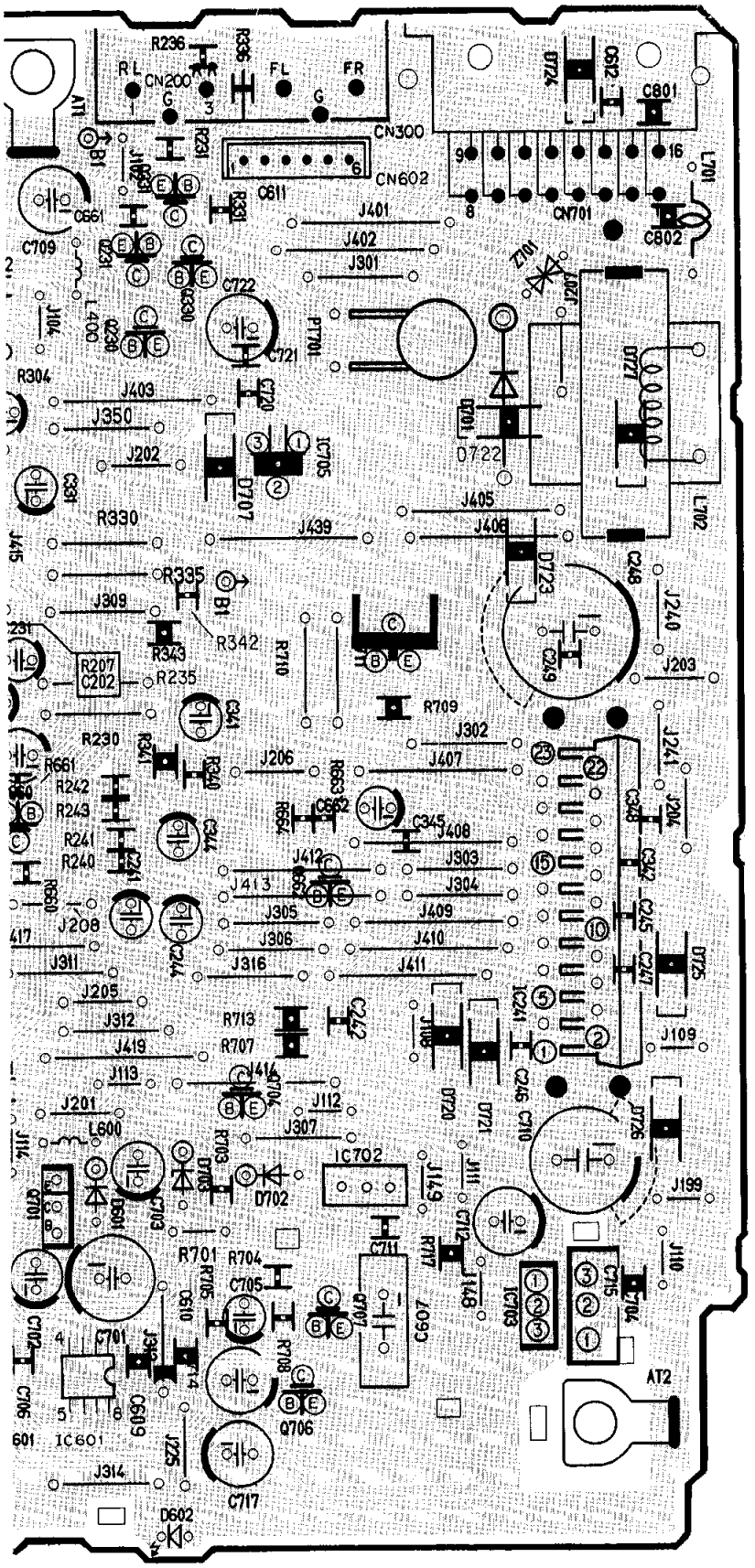



<TOP VIEW>




<BOTTOM VIEW>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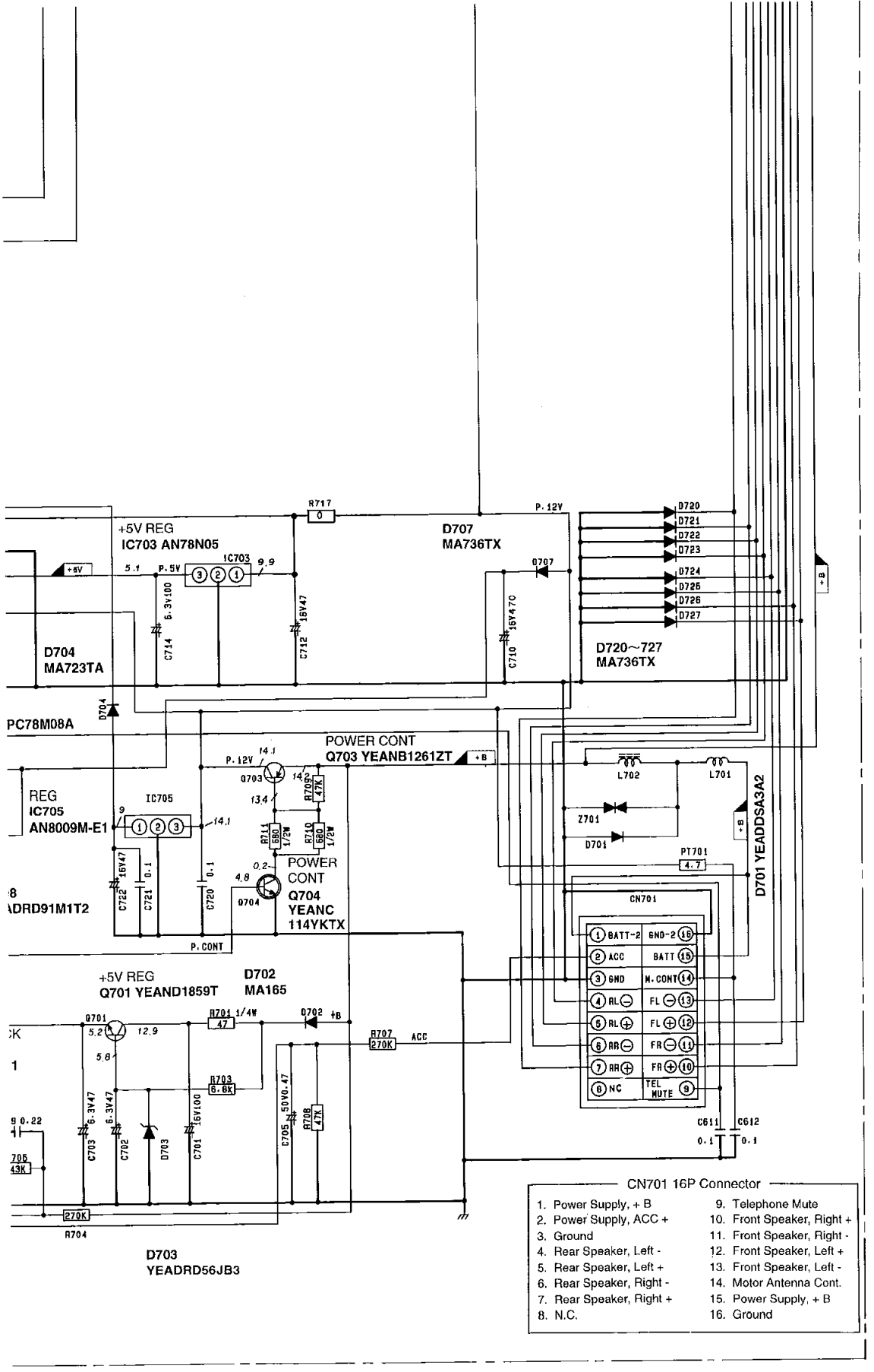
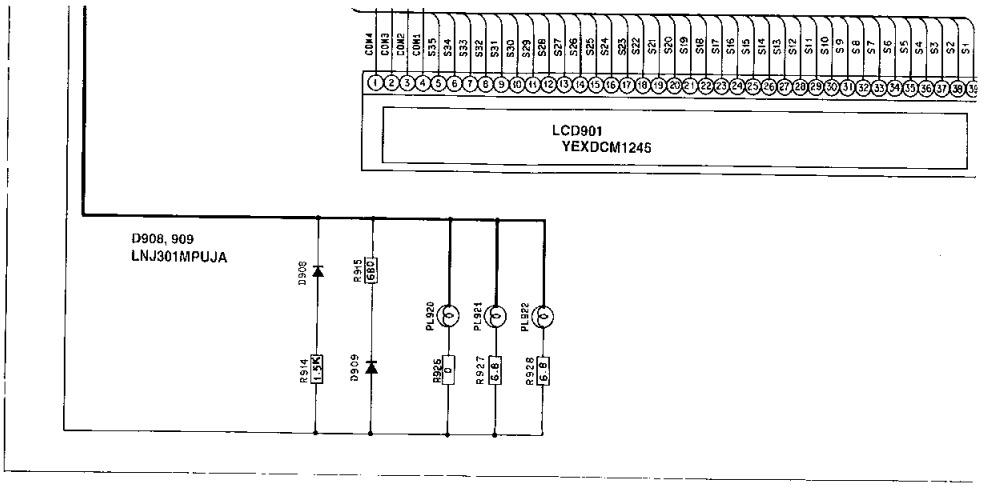
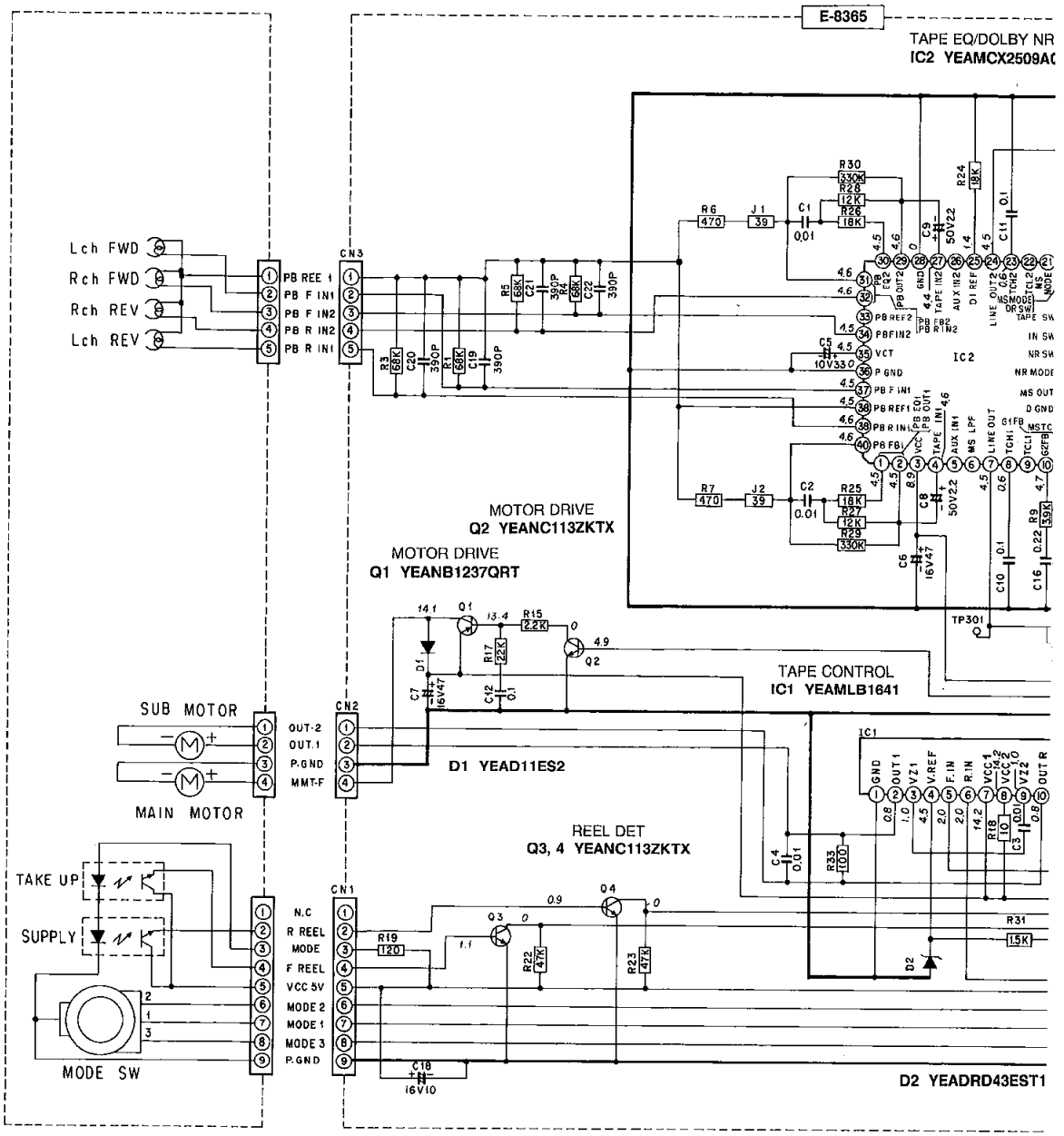



CN701 16P Connector

1. Power Supply, + B
2. Power Supply, ACC +
3. Ground
4. Rear Speaker, Left -
5. Rear Speaker, Left +
6. Rear Speaker, Right -
7. Rear Speaker, Right +
8. N.C.
9. Telephone Mute
10. Front Speaker, Right +
11. Front Speaker, Right -
12. Front Speaker, Left +
13. Front Speaker, Left -
14. Motor Antenna Cont.
15. Power Supply, + B
16. Ground




# SCHEMATIC DIAGRAM (Tape Block) MODELS CQ-RD320/310L

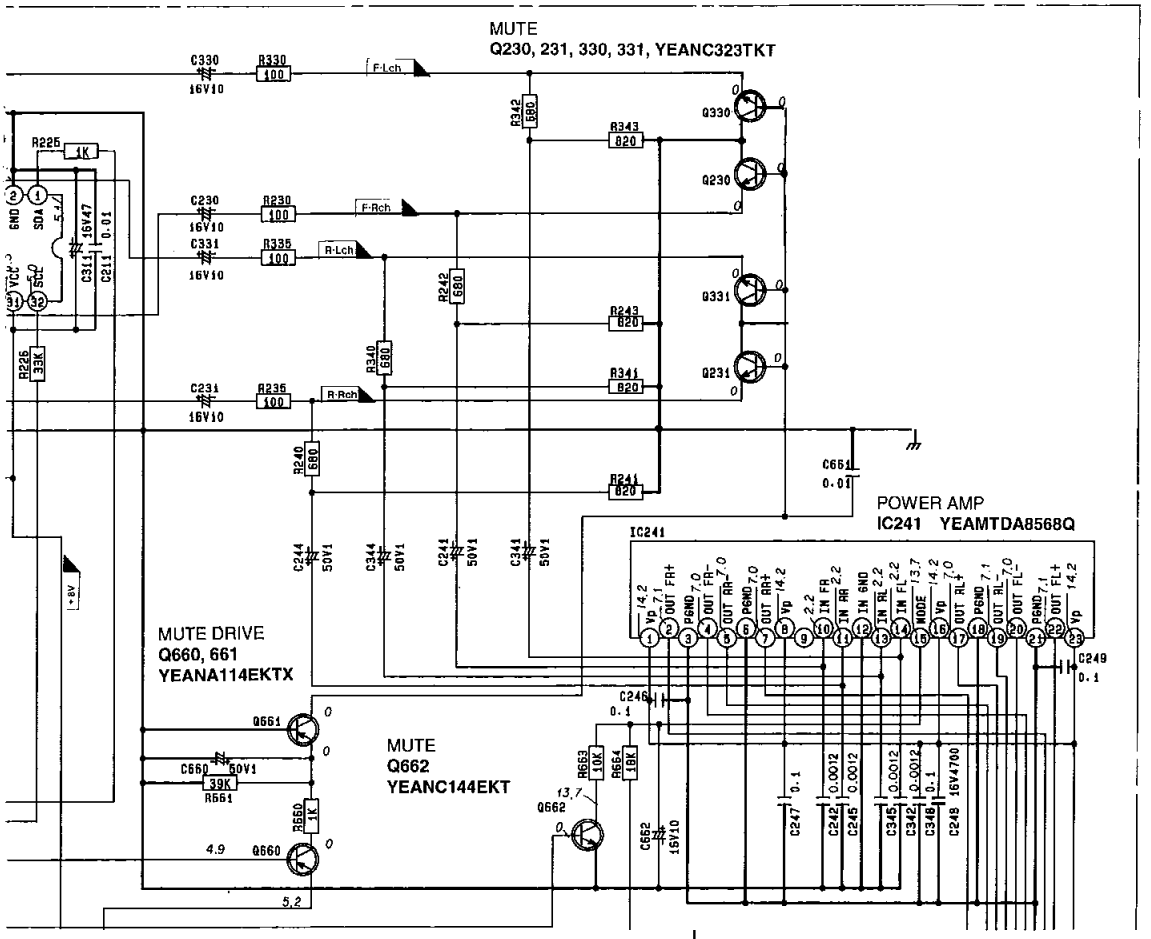


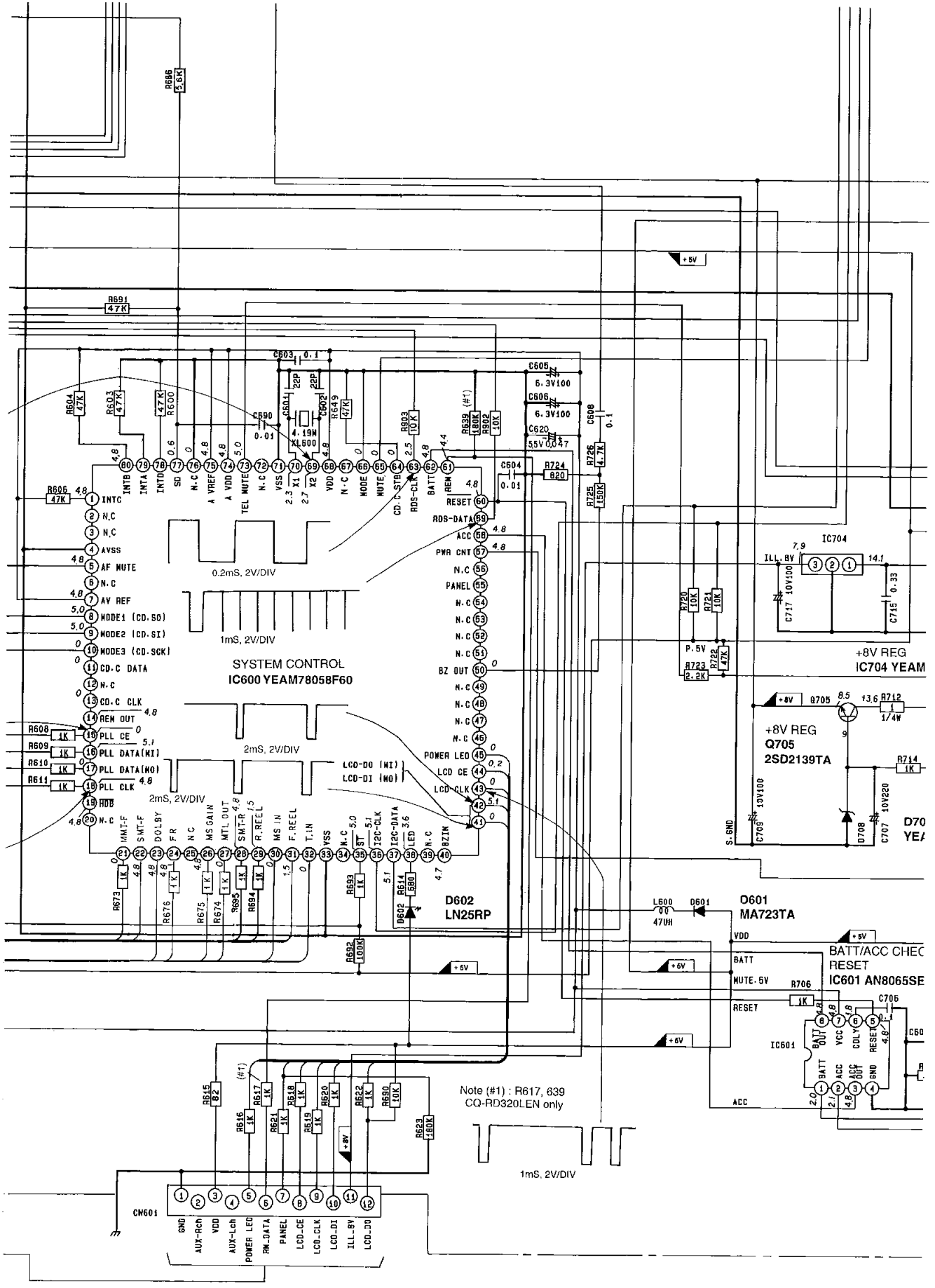
# EN

# WIRING DIAGRAM (Tape E

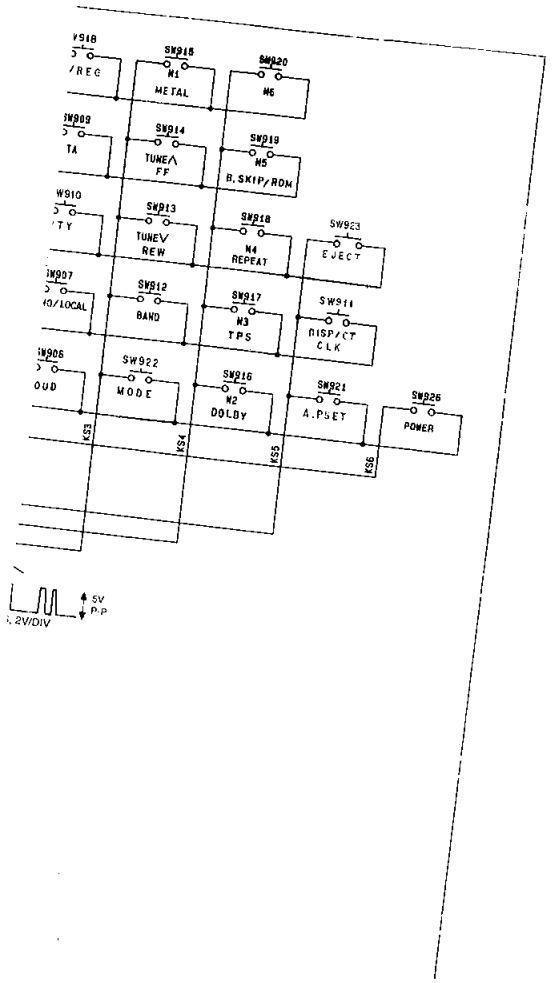
TP201

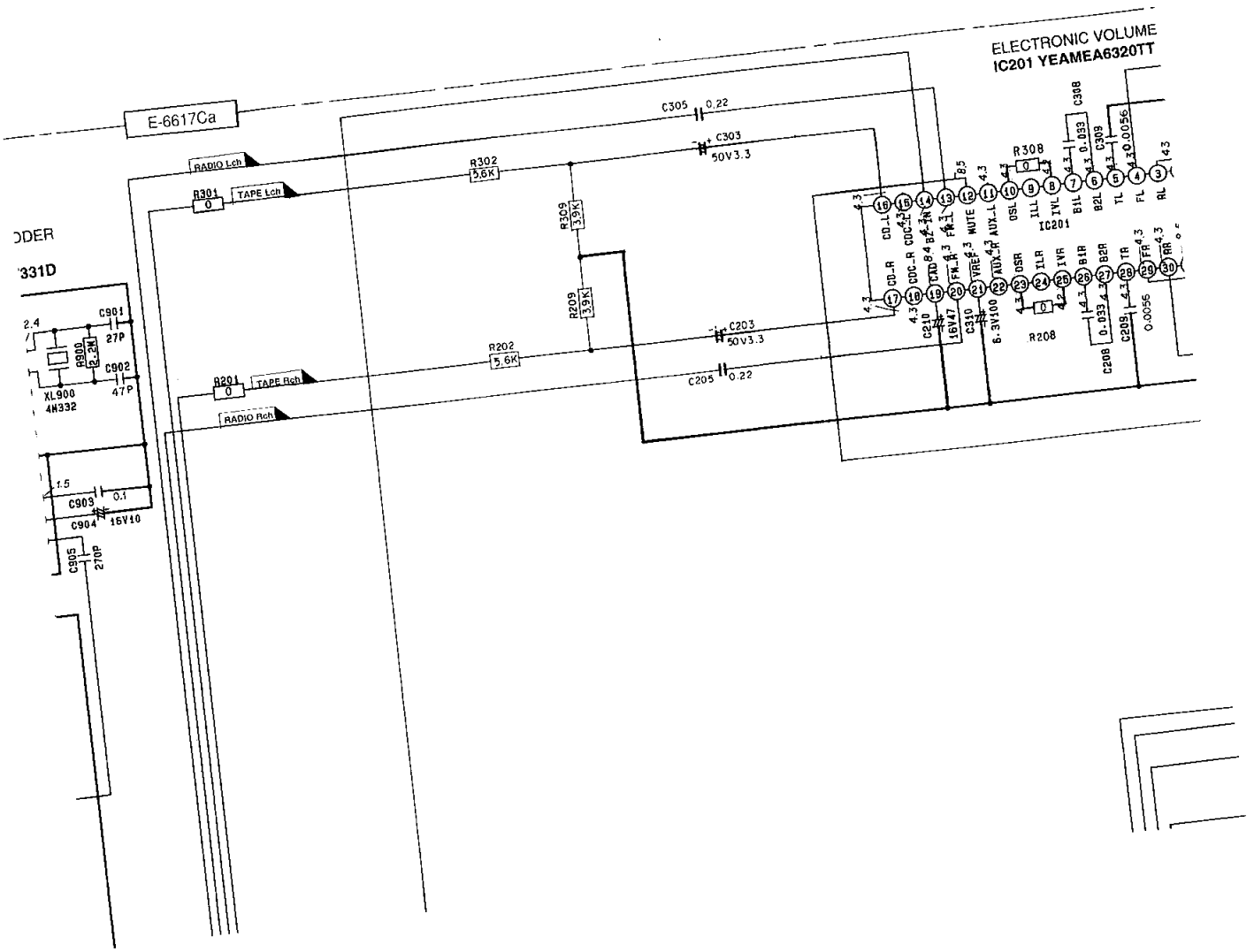
IE-83651

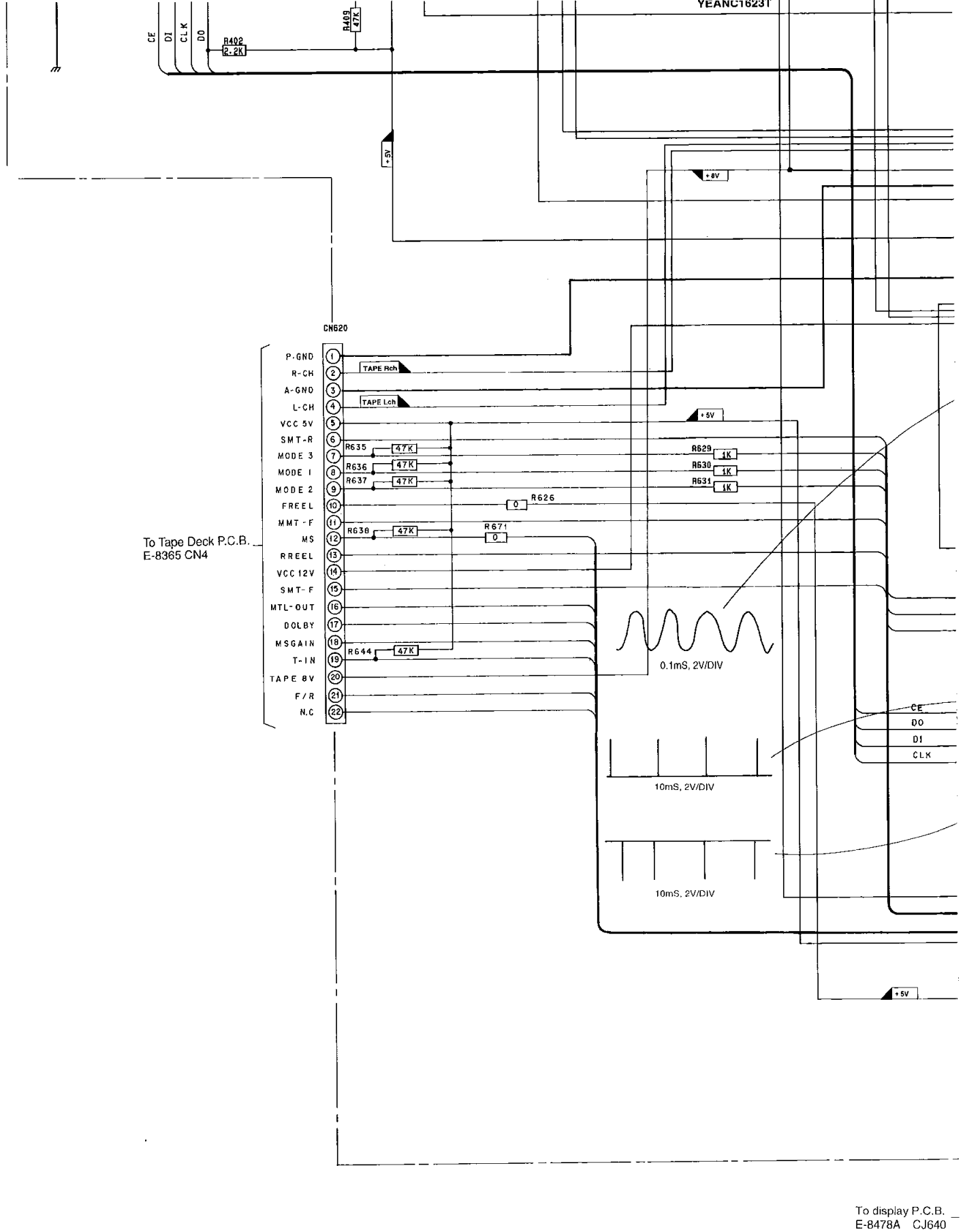



SYSTEM CONTROL
IC600 YEAM78058F60
0.2mS, 2V/DIV
1mS, 2V/DIV
2mS, 2V/DIV
2mS, 2V/DIV
1mS, 2V/DIV
D602
LN25RP
D601
MA723TA
IC704
+8V REG
IC704 YEAM
+8V REG
Q705
2SD2139TA
BATT/ACC CHEC
RESET
IC601 AN8065SE
Note (#1) : R617, 639
CQ-RD320LEN only
CN601
GND
AUX-Rch
VDD
AUX-Lch
POWER LED
RM-DATA
PANEL
LCD-CE
LCD-CLK
LCD-DI
ILL-8V
LCD-DO

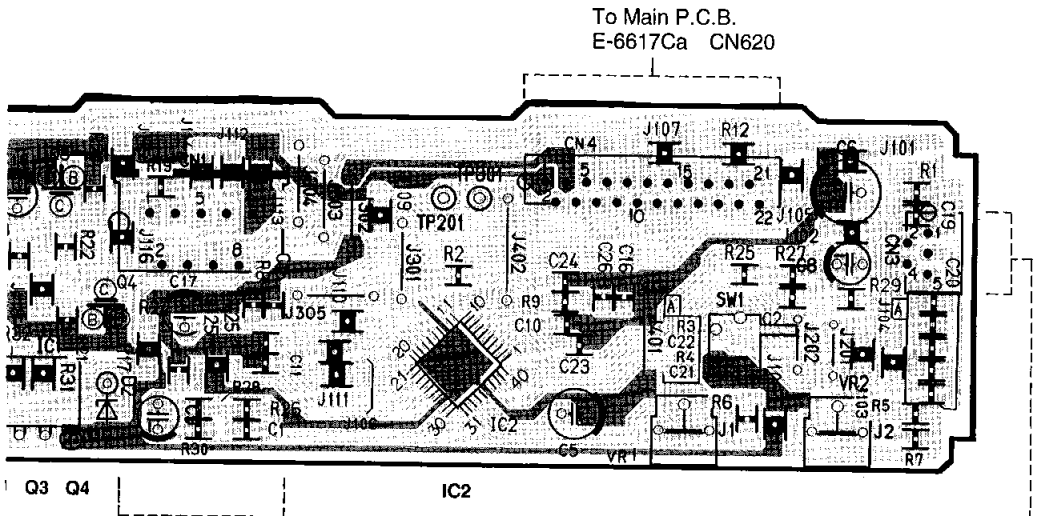
)LEN


SW918
/REC
SW915
M1
METAL
SW920
M6
SW909
TA
SW914
TUNE∧
FF
SW919
M5
B. SKIP/ROM
SW910
TY
SW913
TUNE∨
REW
SW918
M4
REPEAT
SW923
EJECT
SW907
ID/LOCAL
SW912
BAND
SW917
M3
TPS
SW911
DISP/CT
CLK
SW906
OUD
SW922
MODE
SW916
M2
DOLBY
SW921
A.PSET
SW926
POWER
KS3
KS4
KS5
KS6
5V
P-P
2V/DIV

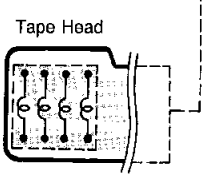

ELECTRONIC VOLUME
IC201 YEAMEA6320TT
E-6617Ca
RADIO Lch
TAPE Lch
TAPE Rch
RADIO Rch
R301
R302
R309
R209
R202
R201
C305
C303
C203
C205
C901
C902
C903
C904
C905
C210
C310
C308
C309
C208
C209
R308
R208
IC201
XL900
4M332
CD_L
CD_R
CAD
MUTE
VREF
AUX_L
AUX_R
OSL
OSR
ILL
ILR
IVL
IVR
B1L
B1R
B2L
B2R
TL
TR
FL
FR
RL
RR


YEANC1623T
CE
DI
CLK
DO
R402
2.2K
R409
47K
+5V
+8V
CN620
P-GND
R-CH
A-GND
L-CH
VCC 5V
SMT-R
MODE 3
MODE 1
MODE 2
FREEL
MMT-F
MS
RREEL
VCC 12V
SMT-F
MTL-OUT
DOLBY
MSGAIN
T-IN
TAPE 8V
F/R
N.C
TAPE Rch
TAPE Lch
R635
R636
R637
R638
R644
47K
R626
0
R671
0
R629
R630
R631
1K
To Tape Deck P.C.B.
E-8365 CN4
0.1mS, 2V/DIV
10mS, 2V/DIV
10mS, 2V/DIV
CE
DO
DI
CLK
To display P.C.B.
E-8478A CJ640

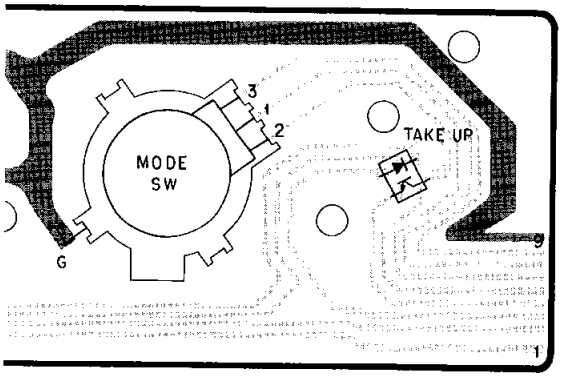
## 3lock) MODELS CQ-RD320/310LEN



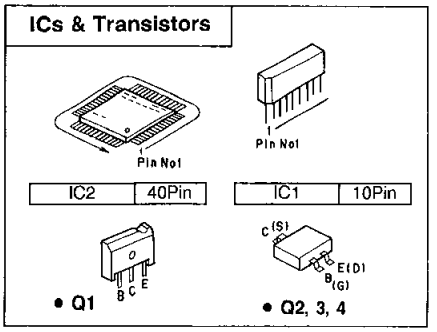

| IC2 | | | |
|---|---|---|---|
| 1 | 4.25 V | 21 | — |
| 2 | 4.5 V | 22 | 0.7 V |
| 3 | 8.9 V | 23 | 0.6 V |
| 4 | 4.6 V | 24 | 4.5 V |
| 5 | — | 25 | 1.4 V |
| 6 | — | 26 | — |
| 7 | 4.5 V | 27 | 4.4 V |
| 8 | 0.6 V | 28 | 0 V |
| 9 | 0 V | 29 | 4.6 V |
| 10 | 4.7 V | 30 | 4.5 V |
| 11 | 4.6 V | 31 | 4.6 V |
| 12 | 0.8 V | 32 | 4.6 V |
| 13 | 0 V | 33 | — |
| 14 | 5.1 V | 34 | 4.5 V |
| 15 | 0.8 V | 35 | 4.5 V |
| 16 | 0 V | 36 | 0 V |
| 17 | — | 37 | 4.5 V |
| 18 | 0 V | 38 | 4.5 V |
| 19 | 5.1 V | 39 | 4.6 V |
| 20 | 5.1 V | 40 | 4.6 V |




| | B | C | E |
|---|---|---|---|
| Q1 | 13.4 | 14.1 | 14.2 |
| Q2 | 4.9 | 0 | 0 |
| Q3 | 1.1 | 0 | 0 |
| Q4 | 0.9 | 0 | 0 |




| Pin | IC1 |
|---|---|
| 1 | 0 |
| 2 | 0.8 |
| 3 | 1.0 |
| 4 | 4.5 |
| 5 | 2.0 |
| 6 | 2.0 |
| 7 | 14.2 |
| 8 | 14.2 |
| 9 | 1.0 |
| 10 | 0.8 |

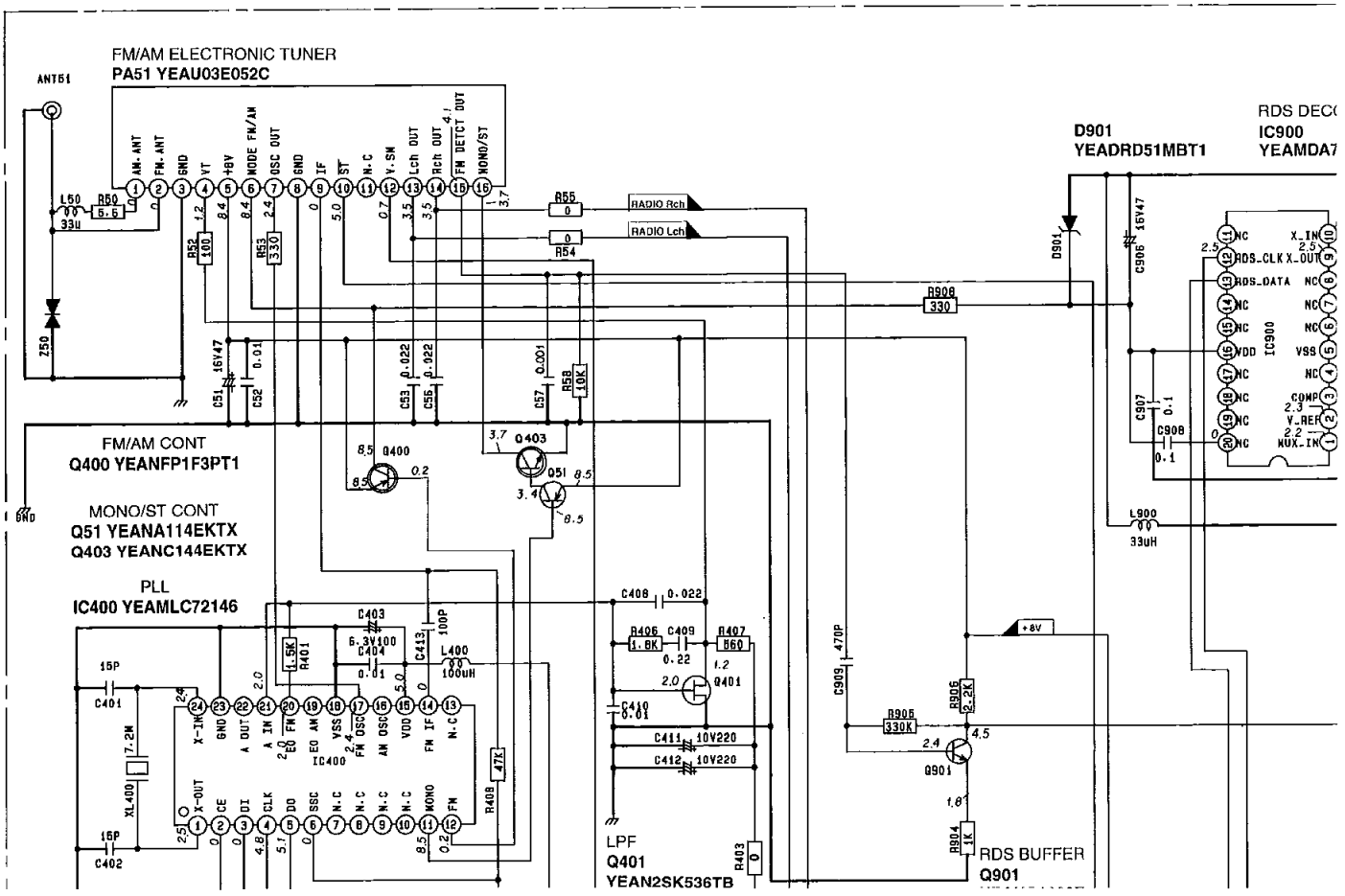


# TERMINALS DESCRIPTION

## ■ IC600 : YEAM78058F60 < Main Block >

| Pin No. | Port | Description | I/O | Vol.(V) | Pin No. | Port | Description | I/O | Vol.(V) |
|---|---|---|---|---|---|---|---|---|---|
| 1 | INIT C | Initial C | I | 4.8 | 41 | LCD-DI (MO) | LCD data input | O | 0 |
| 2 | NC | No connection | — | — | 42 | LCD-DO (MI) | LCD data output | I | 5.1 |
| 3 | NC | No connection | — | — | 43 | LCD-CLK | LCD clock | O | 0 |
| 4 | $AV_{SS}$ | Analog ground | — | — | 44 | LCD-CE | LCD chip enable output | O | 0.2 |
| 5 | AF MUTE | AF mute | O | 4.8 | 45 | POWER LED | Pilot lamp on | O | 0 |
| 6 | NC | No connection | — | — | 46 | NC | No connection | — | — |
| 7 | AVREF | Reference voltage | — | 4.8 | 47 | NC | No connection | — | — |
| 8 | MODE1 | Tape mode SW | I | 5.0 | 48 | NC | No connection | — | — |
| 9 | MODE2 | Tape mode SW | I | 5.0 | 49 | NC | No connection | — | — |
| 10 | MODE3 | Tape mode SW | I | 0 | 50 | BZOUT | BEEP output | O | 0 |
| 11 | NC | No connection | — | — | 51 | NC | No connection | — | — |
| 12 | NC | No connection | — | — | 52 | NC | No connection | — | — |
| 13 | NC | No connection | — | — | 53 | NC | No connection | — | — |
| 14 | NC | No connection | — | — | 54 | NC | No connection | — | — |
| 15 | PLL CE | PLL controller chip enable | O | 0 | 55 | PANEL | Panel detect | I | 4.8 |
| 16 | PLL DATA (MI) | Data from PLL | I | 5.1 | 56 | NC | No connection | — | — |
| 17 | PLL DATA (MO) | Data for PLL | O | 0 | 57 | PWR CNT | Power control | O | 4.8 |
| 18 | PLL CLK | Clock for PLL | O | 4.8 | 58 | ACC | ACC detection | I | 4.8 |
| 19 | NC | No connection | — | — | 59 | RDS DATA | RDS data input | I | 4.8 |
| 20 | NC | No connection | — | — | 60 | /RESET | Reset input | I | 4.8 |
| 21 | MMT-F | Main motor control | O | 0 | 61 | REM | Remocon data input **(Note 2)** | I | 4.4 |

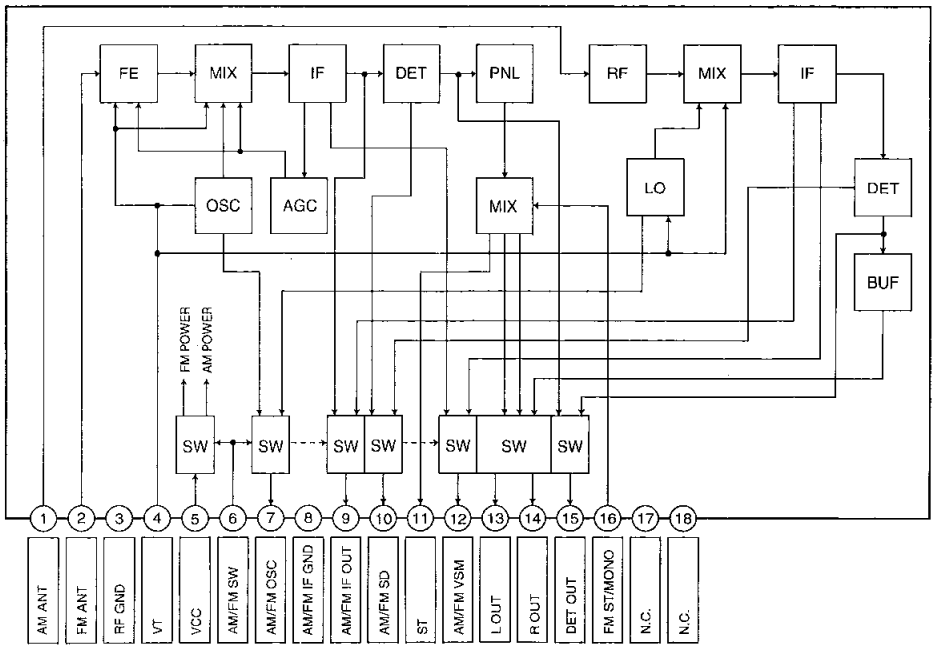
# SCHEMATIC DIAGRAM (Main Block) MODELS CQ-RD320/310LEN



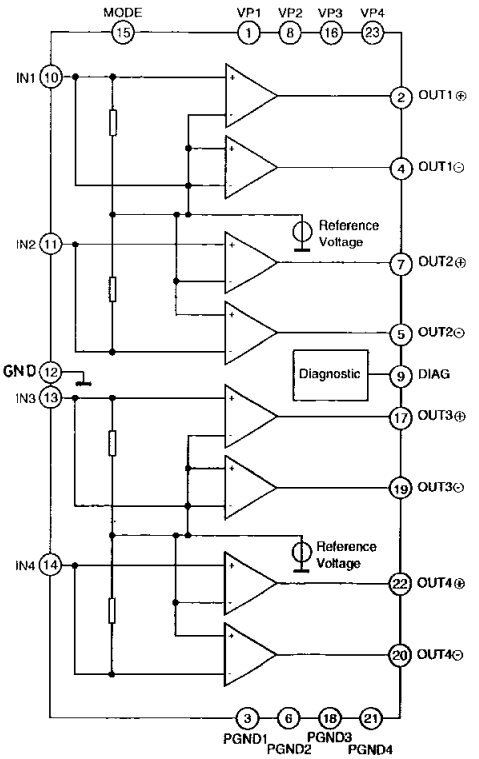
# PACKAGE AND IC BLOCK DIAGRAM / PACKEN UND IC BLOCK DIAGRAM

<Main Block>

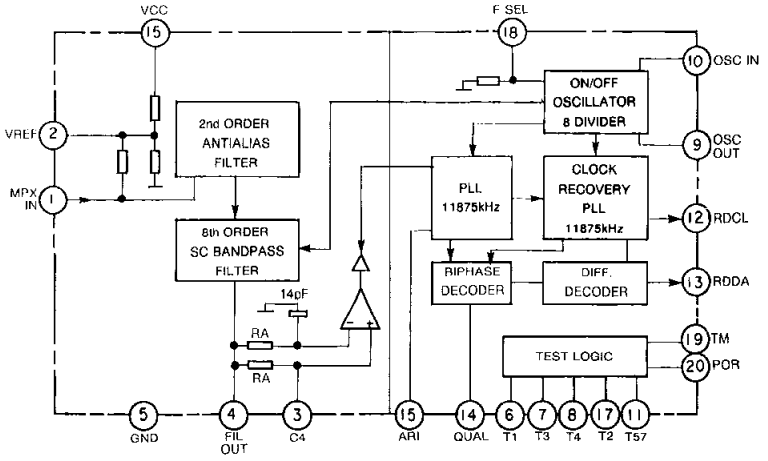
## ● PA51 YEAU03E052C



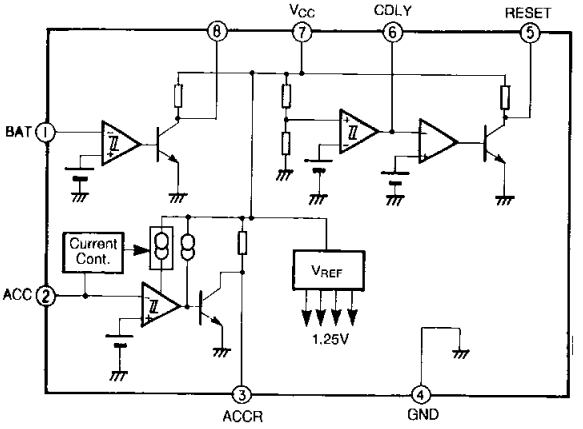

## ● IC241 YEAMTDA8568Q



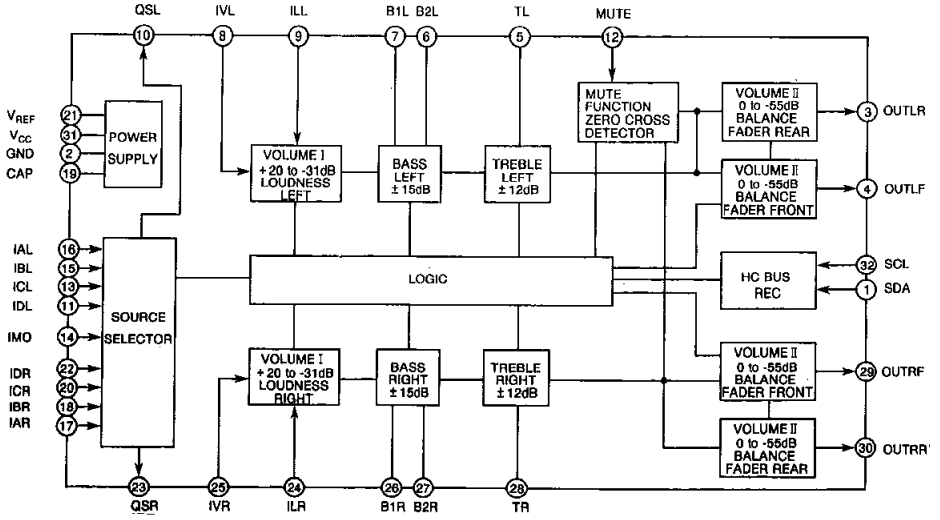

## ● IC900 YEAMDA7331D



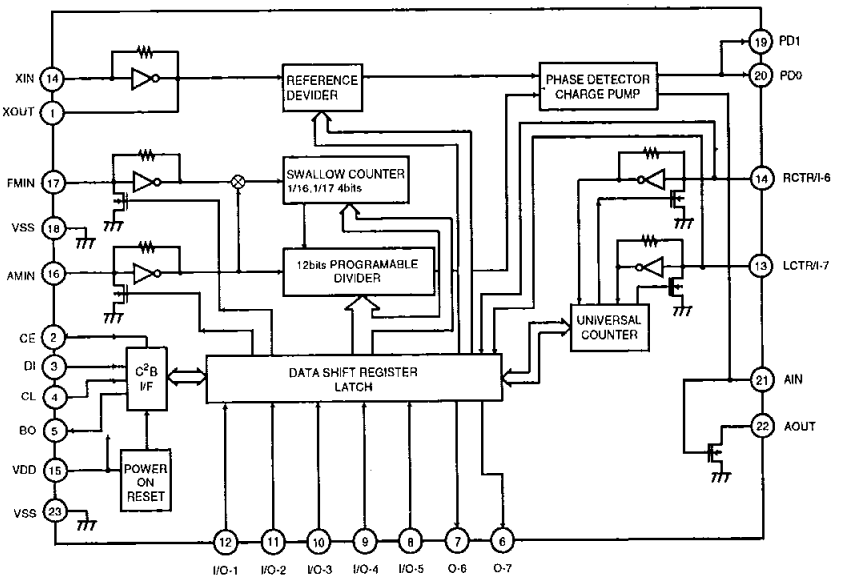

## ● IC601 AN8065SE1




## ● IC201 YEAMEA6320TT

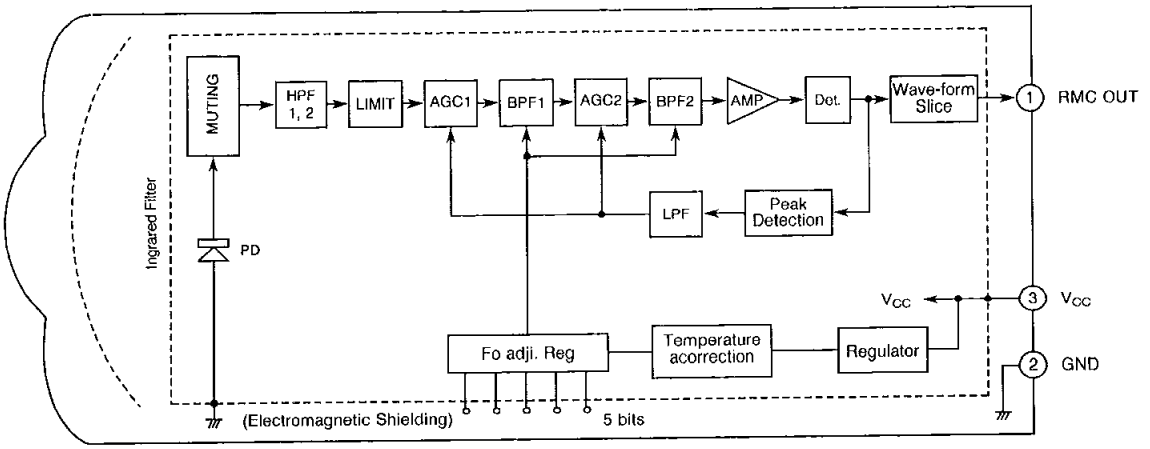


● **IC400**
**YEAMLC72146**



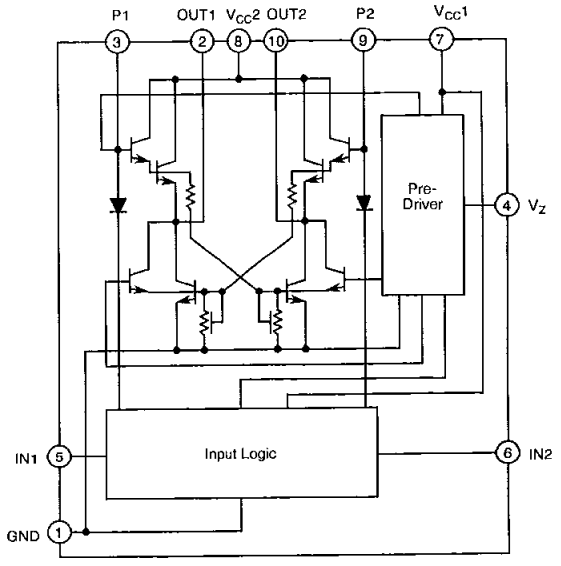

<Display Block>

● **IC902 YEAMSBX8035F**

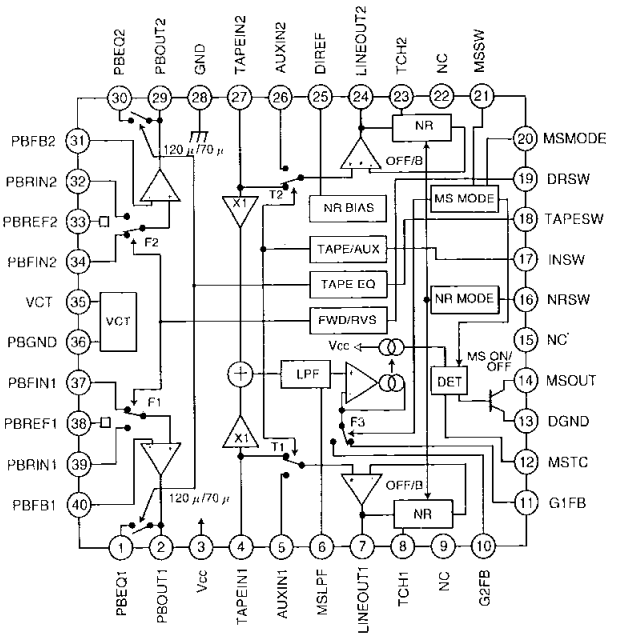



<Tape Block>

● **IC1 YEAMLB1641**




● **IC2 YEAMCX2509AQ**



# 1 REPLACEMENT PARTS LIST

Notes :

1. Be sure to make your orders of replacement parts according to this list.
2. Important safety notice: Components, identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.
3. Location keys in the remarks column indicates the general location of the parts shown in the exploded drawing, as in a road map.
4. The marking (RTL) indicates that Retention Time is limited for this item. After the discontinuation of assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependent on the type of assembly, and in accordance with the laws governing part and product retention. After the end of this period, the assembly will no longer be available.

## 1.1. IC's and Transistors

MAIN BLOCK [E6617C]

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| IC201 | YEAMEA6320TT | IC | |
| IC241 | YEAMTDA8568Q | IC | |
| IC400 | YEAMLC72146 | IC | |
| IC600 | YEAM78058F60 | IC | |
| IC601 | AN8065SE1 | IC | |
| IC703 | AN78N05 | IC | |
| IC704 | YEAMPC78M08A | IC | |
| IC705 | AN8009M-E1 | IC | |
| IC900 | YEAMDA7331D | IC | |
| PA51 | YEAU03E052C | Electronic Tuner | |
| Q51 | YEANA114EKTX | Transistor | |
| Q230 | YEANC323TKT | Transistor | |
| Q231 | YEANC323TKT | Transistor | |
| Q330 | YEANC323TKT | Transistor | |
| Q331 | YEANC323TKT | Transistor | |
| Q400 | YEANFP1F3PT1 | Transistor | |
| Q401 | YEAN2SK536TB | Transistor | |
| Q403 | YEANC144EKT | Transistor | |
| Q660 | YEANA114EKTX | Transistor | |
| Q661 | YEANA114EKTX | Transistor | |
| Q662 | YEANC144EKT | Transistor | |
| Q701 | YEAND1859T | Transistor | |
| Q703 | YEANB1261ZT | Transistor | |
| Q704 | YEANC114YKT | Transistor | |
| Q705 | 2SD2139TA | Transistor | |
| Q901 | YEANC1623 | Transistor | |

DISPLAY BLOCK [E8478A]

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| IC901 | YEAMLC75854T | IC | |
| IC902 | YEAMSBX8035F | IC (CQ-RD320LEN) | |
| Q901 | YEANA114EKTX | Transistor | |

TAPE BLOCK [E8365]

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| IC1 | YEAMLB1641 | IC | |
| IC2 | YEAMCX2509AQ | IC | |
| Q1 | YEANB1237QRT | Transistor | |
| Q2 | YEANC113ZKTX | Transistor | |
| Q3 | YEANC113ZKTX | Transistor | |
| Q4 | YEANC113ZKTX | Transistor | |

## 1.2. Diodes

MAIN BLOCK [E6617C]

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| D601 | MA723TA | Diode | |
| D602 | LN25RP | LED | |
| D701 | YEADDSA3A2 | Diode | |
| D702 | MA165 | Diode | |
| D703 | YEADRD56JB3 | Diode | |
| D704 | MA723TA | Diode | |
| D707 | MA736TX | Diode | |
| D708 | YEADRD91M1T2 | Diode | |
| D720 | MA736TX | Diode | |
| D721 | MA736TX | Diode | |
| D722 | MA736TX | Diode | |
| D723 | MA736TX | Diode | |
| D724 | MA736TX | Diode | |
| D725 | MA736TX | Diode | |
| D726 | MA736TX | Diode | |
| D727 | MA736TX | Diode | |
| D901 | YEADRD51MBT1 | Diode | |
| Z701 | ERZC07DK470 | ZNR | |

DISPLAY BLOCK [E8478A]

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| D901 | MA8047MTW | Diode | |
| D902 | MA8056LMHTX | Diode | |
| D903 | MA8056LMHTX | Diode | |
| D904 | MA8056LMHTX | Diode | |
| D905 | MA8056LMHTX | Diode | |
| D906 | LN1271RAL | LED | |
| D908 | LNJ301MPUJA | LED | |
| D909 | LNJ301MPUJA | LED | |

TAPE BLOCK [E8365]

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| D1 | YEAD11ES2 | Diode | |
| D2 | YEADRD43EST1 | Diode | |

## 1.3. Capacitors

MAIN BLOCK [E6617C]

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| C51 | ECEA1CKA470I | Electrolytic, 47µF 16WV | |
| C52 | YECUS1H103KX | Ceramic, 0.01µF 50WV | |
| C53 | YECUS1E223KX | Ceramic, 0.022µF 25WV | |
| C56 | YECUS1E223KX | Ceramic, 0.022µF 25WV | |
| C57 | YECUS1H102KX | Ceramic, 0.001µF 50WV | |
| C203 | ECA1HSA3R3I | Electrolytic, 3.3µF 50WV | |
| C205 | YECUV1C224KX | Ceramic, 0.22µF 16WV | |
| C208 | YECUS1E333KX | Ceramic, 0.033µF 25WV | |
| C209 | YECUS1H562KX | Ceramic, 0.0056µF 50WV | |
| C210 | ECA1CSA470I | Electrolytic, 47µF 16WV | |
| C211 | YECUS1H103KX | Ceramic, 0.01µF 50WV | |
| C230 | ECA1CSA100I | Electrolytic, 10µF 16WV | |
| C231 | ECA1CSA100I | Electrolytic, 10µF 16WV | |
| C241 | ECA1HSA010I | Electrolytic, 1µF 50WV | |
| C242 | YECUS1H122KX | Ceramic, 0.0012µF 50WV | |
| C244 | ECEA1HKA010I | Electrolytic, 1µF 50WV | |
| C245 | YECUS1H122KX | Ceramic, 0.0012µF 50WV | |
| C246 | YECUS1E104ZF | Ceramic, 0.1µF 25WV | |
| C247 | YECUS1E104ZF | Ceramic, 0.1µF 25WV | |
| C248 | ECA1CDT472Y | Electrolytic, 4700µF 16WV | |
| C249 | YECUS1E104ZF | Ceramic, 0.1µF 25WV | |
| C303 | ECA1HSA3R3I | Electrolytic, 3.3µF 50WV | |
| C305 | YECUV1C224KX | Ceramic, 0.22µF 16WV | |
| C308 | YECUS1E333KX | Ceramic, 0.033µF 25WV | |
| C309 | YECUV2A562KX | Ceramic, 0.0056µF 100WV | |
| C310 | ECA0JSA101I | Electrolytic, 100µF 6.3WV | |
| C311 | ECA1CSA470I | Electrolytic, 47µF 16WV | |
| C330 | ECA1CSA100I | Electrolytic, 10µF 16WV | |
| C331 | ECA1CSA100I | Electrolytic, 10µF 16WV | |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| C341 | ECEA1HKA010I | Electrolytic, 1µF 50WV | |
| C342 | YECUS1H122KX | Ceramic, 0.0012µF 50WV | |
| C344 | ECEA1HKA010I | Electrolytic, 1µF 50WV | |
| C345 | YECUS1H122KX | Ceramic, 0.0012µF 50WV | |
| C348 | YECUS1E104ZF | Ceramic, 0.1µF 25WV | |
| C401 | YECUS1H150JM | Ceramic, 15PF 50WV | |
| C402 | YECUS1H150JM | Ceramic, 15PF 50WV | |
| C403 | ECEA0JKA101I | Electrolytic, 100µF 6.3WV | |
| C404 | YECUS1H103KX | Ceramic, 0.01µF 50WV | |
| C408 | YECUS1E223KX | Ceramic, 0.022µF 25WV | |
| C409 | ECQV1H224JL2 | Plastic Film, 0.22µF 50WV | |
| C410 | YECUS1H103KX | Ceramic, 0.01µF 50WV | |
| C411 | ECEA1AKS221 | Electrolytic, 220µF 10WV | |
| C412 | ECEA1AKS221 | Electrolytic, 220µF 10WV | |
| C413 | YECUS1H101JM | Ceramic, 100PF 50WV | |
| C601 | YECUS1H220JM | Ceramic, 22PF 50WV | |
| C602 | YECUS1H220JM | Ceramic, 22PF 50WV | |
| C603 | YECUS1C104KX | Ceramic, 0.1µF 16WV | |
| C604 | YECUS1H103KX | Ceramic, 0.01µF 50WV | |
| C605 | ECA0JSA101I | Electrolytic, 100µF 6.3WV | |
| C606 | ECA0JSA101I | Electrolytic, 100µF 6.3WV | |
| C608 | YECUV1C104KX | Ceramic, 0.1µF 16WV | |
| C609 | YECUV1C224KX | Ceramic, 0.22µF 16WV | |
| C611 | YECUV1H104ZF | Ceramic, 0.1µF 50WV | |
| C612 | YECUS1E104ZF | Ceramic, 0.1µF 25WV | |
| C620 | EECS5R5T473 | Electrolytic, 0.047FD 5.5WV | |
| C660 | ECA1HSA010I | Electrolytic, 1µF 50WV | |
| C661 | YECUS1H103KX | Ceramic, 0.01µF 50WV | |
| C662 | ECEA1CKA100I | Electrolytic, 10µF 16WV | |
| C690 | YECUS1H103KX | Ceramic, 0.01µF 50WV | |
| C701 | ECEA1CKS101 | Electrolytic, 100µF 16WV | |
| C702 | ECA0JSA470I | Electrolytic, 47µF 6.3WV | |
| C703 | ECA0JSA470I | Electrolytic, 47µF 6.3WV | |
| C705 | ECEA1HKAR47I | Electrolytic, 0.47µF 50WV | |
| C706 | YECUS1C104KX | Ceramic, 0.1µF 16WV | |
| C707 | ECA1AM221I | Electrolytic, 220µF 10WV | |
| C709 | ECEA1AKS101 | Electrolytic, 100µF 10WV | |
| C710 | ECA1CM471B | Electrolytic, 470µF 16WV | |
| C712 | ECEA1CKA470I | Electrolytic, 47µF 16WV | |
| C714 | ECEA0JKA101I | Electrolytic, 100µF 6.3WV | |
| C715 | YECUV1E334ZF | Ceramic, 0.33µF 25WV | |
| C717 | ECEA1AKS101 | Electrolytic, 100µF 10WV | |
| C720 | YECUS1E104ZF | Ceramic, 0.1µF 25WV | |
| C721 | YECUS1E104ZF | Ceramic, 0.1µF 25WV | |
| C722 | ECA1CSA470I | Electrolytic, 47µF 16WV | |
| C901 | YECUS1H270JM | Ceramic, 27PF 50WV | |
| C902 | YECUS1H470JM | Ceramic, 47PF 50WV | |
| C903 | YECUS1C104KX | Ceramic, 0.1µF 16WV | |
| C904 | ECA1CSA100I | Electrolytic, 10µF 16WV | |
| C905 | YECUV1H271JM | Ceramic, 270PF 50WV | |
| C906 | ECA1CSA470I | Electrolytic, 47µF 16WV | |
| C907 | YECUS1C104KX | Ceramic, 0.1µF 16WV | |
| C908 | YECUS1C104KX | Ceramic, 0.1µF 16WV | |
| C909 | YECUS1H471JM | Ceramic, 470PF 50WV | |

DISPLAY BLOCK [E8478A]

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| C901 | YECUS1E104ZF | Ceramic, 0.1µF 25WV | |
| C902 | YECUS1E104ZF | Ceramic, 0.1µF 25WV | |
| C903 | YECUS1H681JM | Ceramic, 680PF 50WV | |
| C904 | YECUS1E104ZF | Ceramic, 0.1µF 25WV | |
| C905 | YECUS1E104ZF | (CQ-RD320LEN) 0.1µF 25WV | |
| C906 | YECUS1H102KX | (CQ-RD320LEN) 0.001µF 50WV | |
| C912 | YECUS1E104ZF | Ceramic, 0.1µF 25WV | |

TAPE BLOCK [E8365]

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| C1 | YECUS1H103KX | Ceramic, 0.01µF 50WV | |
| C2 | YECUS1H103KX | Ceramic, 0.01µF 50WV | |
| C3 | YECUS1H103KX | Ceramic, 0.01µF 50WV | |
| C4 | YECUS1H103KX | Ceramic, 0.01µF 50WV | |
| C5 | ECEA1AKS330I | Electrolytic, 33µF 10WV | |
| C6 | ECEA1CKS470I | Electrolytic, 47µF 16WV | |
| C7 | ECEA1CKS470I | Electrolytic, 47µF 16WV | |
| C8 | ECEA1HKS2R2I | Electrolytic, 2.2µF 50WV | |
| C9 | ECEA1HKS2R2I | Electrolytic, 2.2µF 50WV | |
| C10 | YECUS1C104KX | Ceramic, 0.1µF 16WV | |
| C11 | YECUS1C104KX | Ceramic, 0.1µF 16WV | |
| C12 | YECUS1C104KX | Ceramic, 0.1µF 16WV | |
| C15 | YECUS1E223KX | Ceramic, 0.022µF 25WV | |
| C16 | YECUS1C224KX | Ceramic, 0.22µF 16WV | |
| C17 | ECEA1CKS100I | Electrolytic, 10µF 16WV | |
| C18 | ECEA1CKS100I | Electrolytic, 10µF 16WV | |
| C19 | YECUS1H391JM | Ceramic, 390PF 50WV | |
| C20 | YECUS1H391JM | Ceramic, 390PF 50WV | |
| C21 | YECUS1H391JM | Ceramic, 390PF 50WV | |
| C22 | YECUS1H391JM | Ceramic, 390PF 50WV | |
| C24 | YECUS1H822KX | Ceramic, 0.0082µF 50WV | |

## 1.4. Resistors

MAIN BLOCK [E6617C]

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| J192 | ERJ8GEY0R00V | Chip, 0Ω 1/8W | |
| J193 | ERJ8GEY0R00V | Chip, 0Ω 1/8W | |
| J194 | ERJ8GEY0R00V | Chip, 0Ω 1/8W | |
| R50 | ERJ6GEYJ5R6 | Chip, 5.6Ω 1/10W | |
| R52 | ERJ8GEYJ101V | Chip, 100Ω 1/8W | |
| R53 | ERJ6GEYJ331 | Chip, 330Ω 1/10W | |
| R54 | ERJ6GEY0R00V | Chip, 0Ω 1/10W | |
| R55 | ERJ6GEY0R00V | Chip, 0Ω 1/10W | |
| R58 | ERJ6GEYJ103 | Chip, 10kΩ 1/10W | |
| R201 | ERJ6GEY0R00V | Chip, 0Ω 1/10W | |
| R202 | ERJ6GEYJ562 | Chip, 5.6kΩ 1/10W | |
| R208 | ERJ6GEY0R00V | Chip, 0Ω 1/10W | |
| R209 | ERJ6GEYJ392 | Chip, 3.9kΩ 1/10W | |
| R225 | ERJ8GEYJ102V | Chip, 1kΩ 1/8W | |
| R226 | ERJ8GEYJ333V | Chip, 33kΩ 1/8W | |
| R230 | ERD25TJ101 | Carbon, 100Ω 1/4W | |
| R235 | ERD25TJ101 | Carbon, 100Ω 1/4W | |
| R240 | ERJ6GEYJ681 | Chip, 680Ω 1/10W | |
| R241 | ERJ6GEYJ821 | Chip, 820Ω 1/10W | |
| R242 | ERJ6GEYJ681 | Chip, 680Ω 1/10W | |
| R243 | ERJ6GEYJ821 | Chip, 820Ω 1/10W | |
| R301 | ERJ6GEY0R00V | Chip, 0Ω 1/10W | |
| R302 | ERJ6GEYJ562 | Chip, 5.6kΩ 1/10W | |
| R308 | ERJ6GEY0R00V | Chip, 0Ω 1/10W | |
| R309 | ERJ6GEYJ392 | Chip, 3.9kΩ 1/10W | |
| R330 | ERD25TJ101 | Carbon, 100Ω 1/4W | |
| R335 | ERD25TJ101 | Carbon, 100Ω 1/4W | |
| R340 | ERJ6GEYJ681 | Chip, 680Ω 1/10W | |
| R341 | ERJ8GEYJ821V | Chip, 820Ω 1/8W | |
| R342 | ERJ6GEYJ681 | Chip, 680Ω 1/10W | |
| R343 | ERJ8GEYJ821V | Chip, 820Ω 1/8W | |
| R401 | ERJ6GEYJ152 | Chip, 1.5kΩ 1/10W | |
| R402 | ERJ6GEYJ222 | Chip, 2.2kΩ 1/10W | |
| R403 | ERJ6GEY0R00V | Chip, 0Ω 1/10W | |
| R406 | ERJ6GEYJ182 | Chip, 1.8kΩ 1/10W | |
| R407 | ERJ6GEYJ561 | Chip, 560Ω 1/10W | |
| R408 | ERJ8GEYJ473V | Chip, 47kΩ 1/8W | |
| R409 | ERJ6GEYJ473 | Chip, 47kΩ 1/10W | |
| R600 | ERJ6GEYJ473 | Chip, 47kΩ 1/10W | |
| R603 | ERJ6GEYJ473 | Chip, 47kΩ 1/10W | |
| R604 | ERJ6GEYJ473 | Chip, 47kΩ 1/10W | |
| R606 | ERJ6GEYJ473 | Chip, 47kΩ 1/10W | |
| R608 | ERJ6GEYJ102 | Chip, 1kΩ 1/10W | |
| R609 | ERJ6GEYJ102 | Chip, 1kΩ 1/10W | |
| R610 | ERJ6GEYJ102 | Chip, 1kΩ 1/10W | |
| R611 | ERJ6GEYJ102 | Chip, 1kΩ 1/10W | |
| R614 | ERJ6GEYJ681 | Chip, 680Ω 1/10W | |
| R615 | ERJ8GEYJ820V | Chip, 82Ω 1/8W | |
| R616 | ERJ6GEYJ102 | Chip, 1kΩ 1/10W | |
| R617 | ERJ8GEYJ102V | (CQ-RD320LEN) 1kΩ 1/8W | |
| R618 | ERJ6GEYJ102 | Chip, 1kΩ 1/10W | |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| R619 | ERJ6GEYJ102 | Chip, 1kΩ 1/10W | |
| R620 | ERJ6GEYJ102 | Chip, 1kΩ 1/10W | |
| R621 | ERJ6GEYJ102 | Chip, 1kΩ 1/10W | |
| R622 | ERJ6GEYJ102 | Chip, 1kΩ 1/10W | |
| R623 | ERJ8GEYJ184V | Chip, 180kΩ 1/8W | |
| R626 | ERJ6GEY0R00V | Chip, 0Ω 1/10W | |
| R629 | ERJ6GEYJ102 | Chip, 1kΩ 1/10W | |
| R630 | ERJ8GEYJ102V | Chip, 1kΩ 1/8W | |
| R631 | ERJ6GEYJ102 | Chip, 1kΩ 1/10W | |
| R635 | ERJ6GEYJ473 | Chip, 47kΩ 1/10W | |
| R636 | ERJ8GEYJ473V | Chip, 47kΩ 1/8W | |
| R637 | ERJ6GEYJ473 | Chip, 47kΩ 1/10W | |
| R638 | ERJ6GEYJ473 | Chip, 47kΩ 1/10W | |
| R639 | ERJ6GEYJ184 | (CQ-RD320LEN) 180kΩ 1/10W | |
| R644 | ERJ6GEYJ473 | Chip, 47kΩ 1/10W | |
| R649 | ERJ8GEYJ473V | Chip, 47kΩ 1/8W | |
| R660 | ERJ6GEYJ102 | Chip, 1kΩ 1/10W | |
| R661 | ERJ6GEYJ393 | Chip, 39kΩ 1/10W | |
| R663 | ERJ6GEYJ103 | Chip, 10kΩ 1/10W | |
| R664 | ERJ6GEYJ183 | Chip, 18kΩ 1/10W | |
| R671 | ERJ6GEY0R00V | Chip, 0Ω 1/10W | |
| R673 | ERJ6GEYJ102 | Chip, 1kΩ 1/10W | |
| R674 | ERJ6GEYJ102 | Chip, 1kΩ 1/10W | |
| R675 | ERJ6GEYJ102 | Chip, 1kΩ 1/10W | |
| R676 | ERJ6GEYJ102 | Chip, 1kΩ 1/10W | |
| R686 | ERJ6GEYJ562 | Chip, 5.6kΩ 1/10W | |
| R690 | ERJ6GEYJ103 | Chip, 10kΩ 1/10W | |
| R691 | ERJ6GEYJ473 | Chip, 47kΩ 1/10W | |
| R692 | ERJ8GEYJ104V | Chip, 100kΩ 1/8W | |
| R693 | ERJ8GEYJ102V | Chip, 1kΩ 1/8W | |
| R694 | ERJ6GEYJ102 | Chip, 1kΩ 1/10W | |
| R695 | ERJ8GEYJ102V | Chip, 1kΩ 1/8W | |
| R701 | ERDS2FJ470 | Carbon, 47Ω 1/4W | |
| R703 | ERJ6GEYJ682 | Chip, 6.8kΩ 1/10W | |
| R704 | ERJ6GEYJ274 | Chip, 270kΩ 1/10W | |
| R705 | ERJ6GEYJ433 | Chip, 43kΩ 1/10W | |
| R706 | ERJ6GEYJ102 | Chip, 1kΩ 1/10W | |
| R707 | ERJ8GEYJ274V | Chip, 270kΩ 1/8W | |
| R708 | ERJ6GEYJ473 | Chip, 47kΩ 1/10W | |
| R709 | ERJ8GEYJ473V | Chip, 47kΩ 1/8W | |
| R710 | ERDS1FJ681 | Carbon, 680Ω 1/2W | |
| R711 | ERDS1FJ681 | Carbon, 680Ω 1/2W | |
| R712 | ERDS2FJ1R0T | Carbon, 1.0Ω 1/4W | |
| R714 | ERJ6GEYJ102 | Chip, 1kΩ 1/10W | |
| R717 | ERJ8GEY0R00V | Chip, 0Ω 1/8W | |
| R720 | ERJ8GEYJ103V | Chip, 10kΩ 1/8W | |
| R721 | ERJ8GEYJ103V | Chip, 10kΩ 1/8W | |
| R722 | ERJ8GEYJ473V | Chip, 47kΩ 1/8W | |
| R723 | ERJ6GEYJ222 | Chip, 2.2kΩ 1/10W | |
| R724 | ERJ6GEYJ821 | Chip, 820Ω 1/10W | |
| R725 | ERJ6GEYJ154 | Chip, 150kΩ 1/10W | |
| R726 | ERJ8GEYJ472V | Chip, 4.7kΩ 1/8W | |
| R900 | ERJ6GEYJ225V | Chip, 2.2MΩ 1/10W | |
| R902 | ERJ8GEYJ103V | Chip, 10kΩ 1/8W | |
| R903 | ERJ8GEYJ103V | Chip, 10kΩ 1/8W | |
| R904 | ERJ6GEYJ102 | Chip, 1kΩ 1/10W | |
| R905 | ERJ6GEYJ334 | Chip, 330kΩ 1/10W | |
| R906 | ERJ6GEYJ222 | Chip, 2.2kΩ 1/10W | |
| R908 | ERJ8GEYJ331V | Chip, 330Ω 1/8W | |

DISPLAY BLOCK [E8478A]

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| R901 | ERJ6GEYJ4R7 | Chip, 4.7Ω 1/10W | |
| R902 | ERJ6GEYJ102 | (CQ-RD320LEN) 1kΩ 1/10W | |
| R903 | ERJ6GEYJ102 | Chip, 1kΩ 1/10W | |
| R904 | ERJ6GEYJ102 | Chip, 1kΩ 1/10W | |
| R905 | ERJ6GEYJ102 | Chip, 1kΩ 1/10W | |
| R906 | ERJ6GEYJ102 | Chip, 1kΩ 1/10W | |
| R908 | ERJ6GEYJ182 | Chip, 1.8kΩ 1/10W | |
| R909 | ERJ6GEYJ4R7 | Chip, 4.7Ω 1/10W | |
| R910 | ERJ6GEYJ473 | Chip, 47kΩ 1/10W | |
| R911 | ERJ6GEYJ103 | Chip, 10kΩ 1/10W | |
| R912 | ERJ6GEYJ102 | Chip, 1kΩ 1/10W | |
| R914 | ERJ6GEYJ152 | Chip, 1.5kΩ 1/10W | |
| R915 | ERJ6GEYJ681 | Chip, 680Ω 1/10W | |
| R926 | ERJ6GEY0R00V | Chip, 0Ω 1/10W | |
| R927 | ERJ8GEYJ6R8V | Chip, 6.8Ω 1/8W | |
| R928 | ERJ6GEYJ6R8V | Chip, 6.8Ω 1/10W | |

TAPE BLOCK [E8365]

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| J1 | ERDS2TJ390 | Carbon, 39Ω 1/4W | |
| J2 | ERDS2TJ390 | Carbon, 39Ω 1/4W | |
| J101 | ERJ8GEY0R00V | Chip, 0Ω 1/8W | |
| J102 | ERJ8GEY0R00V | Chip, 0Ω 1/8W | |
| J103 | ERJ8GEY0R00V | Chip, 0Ω 1/8W | |
| J104 | ERJ8GEY0R00V | Chip, 0Ω 1/8W | |
| J105 | ERJ8GEY0R00V | Chip, 0Ω 1/8W | |
| J106 | ERJ8GEY0R00V | Chip, 0Ω 1/8W | |
| J107 | ERJ8GEY0R00V | Chip, 0Ω 1/8W | |
| J108 | ERJ8GEY0R00V | Chip, 0Ω 1/8W | |
| J109 | ERJ8GEY0R00V | Chip, 0Ω 1/8W | |
| J110 | ERJ8GEY0R00V | Chip, 0Ω 1/8W | |
| J111 | ERJ8GEY0R00V | Chip, 0Ω 1/8W | |
| J112 | ERJ8GEY0R00V | Chip, 0Ω 1/8W | |
| J113 | ERJ8GEY0R00V | Chip, 0Ω 1/8W | |
| J114 | ERJ8GEY0R00V | Chip, 0Ω 1/8W | |
| J115 | ERJ8GEY0R00V | Chip, 0Ω 1/8W | |
| J116 | ERJ8GEY0R00V | Chip, 0Ω 1/8W | |
| J117 | ERJ8GEY0R00V | Chip, 0Ω 1/8W | |
| J118 | ERJ8GEY0R00V | Chip, 0Ω 1/8W | |
| J119 | ERJ8GEY0R00V | Chip, 0Ω 1/8W | |
| J120 | ERJ8GEY0R00V | Chip, 0Ω 1/8W | |
| J121 | ERJ8GEY0R00V | Chip, 0Ω 1/8W | |
| J122 | ERJ8GEY0R00V | Chip, 0Ω 1/8W | |
| J123 | ERJ8GEY0R00V | Chip, 0Ω 1/8W | |
| J124 | ERJ8GEY0R00V | Chip, 0Ω 1/8W | |
| J125 | ERJ8GEY0R00V | Chip, 0Ω 1/8W | |
| J126 | ERJ8GEY0R00V | Chip, 0Ω 1/8W | |
| R1 | ERJ6GEYJ683 | Chip, 68kΩ 1/10W | |
| R2 | ERJ6GEYJ223 | Chip, 22kΩ 1/10W | |
| R3 | ERJ6GEYJ683 | Chip, 68kΩ 1/10W | |
| R4 | ERJ6GEYJ683 | Chip, 68kΩ 1/10W | |
| R5 | ERJ6GEYJ683 | Chip, 68kΩ 1/10W | |
| R6 | ERJ6GEYJ471 | Chip, 470Ω 1/10W | |
| R7 | ERJ6GEYJ471 | Chip, 470Ω 1/10W | |
| R8 | ERJ6GEYJ104 | Chip, 100kΩ 1/10W | |
| R9 | ERJ6GEYJ392 | Chip, 3.9kΩ 1/10W | |
| R12 | ERJ8GEYJ103V | Chip, 10kΩ 1/8W | |
| R13 | ERJ8GEYJ103V | Chip, 10kΩ 1/8W | |
| R14 | ERJ8GEYJ103V | Chip, 10kΩ 1/8W | |
| R15 | ERJ8GEYJ222V | Chip, 2.2kΩ 1/8W | |
| R17 | ERJ6GEYJ223 | Chip, 22kΩ 1/10W | |
| R18 | ERG1SJ100 | Metal Oxid, 10Ω 1W | |
| R19 | ERJ6GEYJ121 | Chip, 120Ω 1/10W | |
| R22 | ERJ6GEYJ473 | Chip, 47kΩ 1/10W | |
| R23 | ERJ6GEYJ473 | Chip, 47kΩ 1/10W | |
| R24 | ERJ6GEYJ183 | Chip, 18kΩ 1/10W | |
| R25 | ERJ6GEYJ183 | Chip, 18kΩ 1/10W | |
| R26 | ERJ6GEYJ183 | Chip, 18kΩ 1/10W | |
| R27 | ERJ6GEYJ123 | Chip, 12kΩ 1/10W | |
| R28 | ERJ6GEYJ123 | Chip, 12kΩ 1/10W | |
| R29 | ERJ6GEYJ334 | Chip, 330kΩ 1/10W | |
| R30 | ERJ6GEYJ334 | Chip, 330kΩ 1/10W | |
| R31 | ERJ8GEYJ152V | Chip, 1.5kΩ 1/8W | |
| R33 | ERJ8GEYJ101V | Chip, 100Ω 1/8W | |

## 1.5. Connectors

MAIN BLOCK [E6617C]

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| CJ620 | YEAES22B100B | Connector, 22P flexible | |
| CN601 | YEAE012475 | Connector, 12P | |
| CN620 | YEAE012659 | Connector, 22P | |
| CN701 | YEAE012194 | Connector, 16P | |

DISPLAY BLOCK [E8478A]

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| CJ640 | YEAE012476 | Connector, 12P | |

TAPE BLOCK [E8365]

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| CN1 | YEAE5597A09 | Connector, 9P | |
| CN2 | YEAE5325404 | Connector, 4P | |
| CN3 | YEAE012684 | Connector, 5P | |
| CN4 | YEAE012659 | Connector, 22P | |

## 1.6. Electric Parts

SWITCHES

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| SW1 | YEAS08031B62 | Switch | |
| SW901 | EVQPJH05K | Switch | |
| SW902 | EVQPJH05K | Switch | |
| SW903 | EVQPJH05K | Switch | |
| SW904 | YEAS09312 | Switch | |
| SW905 | EVQPJH05K | Switch | |
| SW906 | EVQPJH05K | Switch | |
| SW907 | EVQPJH05K | Switch | |
| SW908 | YEAS09312 | Switch | |
| SW909 | EVQPJH05K | Switch | |
| SW910 | EVQPJH05K | Switch | |
| SW911 | EVQPJH05K | Switch | |
| SW912 | EVQPJH05K | Switch | |
| SW913 | YEAS09312 | Switch | |
| SW914 | EVQPJH05K | Switch | |
| SW915 | YEAS09312 | Switch | |
| SW916 | YEAS09312 | Switch | |
| SW917 | YEAS09312 | Switch | |
| SW918 | YEAS09312 | Switch | |
| SW919 | YEAS09312 | Switch | |
| SW920 | EVQPJH05K | Switch | |
| SW921 | EVQPJH05K | Switch | |
| SW922 | EVQPJH05K | Switch | |
| SW923 | EVQPJH05K | Switch | |
| SW926 | EVQPJH05K | Switch | |

CRYSTALS

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| XL400 | YEXL49U07200 | Crystal OSC | |
| XL600 | YEXL49U0419 | Crystal OSC | |
| XL900 | YEXL49U0433T | Crystal OSC | |

COILS

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| L50 | YELT02C330KT | Coil | |
| L400 | YELT02C101KT | Coil | |
| L600 | YELT02C470KT | Coil | |
| L701 | YELTBL01R1AT | Coil | |
| L702 | YETQ026F143 | Coil | |
| L900 | YELT02C330KT | Coil | |

LCD

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| LCD901 | YEXDCM1245 | LCD | |

LAMPS

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| Z50 | YEAL02007 | Neon Lamp | |
| PL920 | YEALHSKB001 | Pilot Lamp | |
| PL921 | YEALHSLG002 | Pilot Lamp | |
| PL922 | YEALHSLG002 | Pilot Lamp | |

THERMISTOR

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| PT701 | YERT7AR4R7MT | Thermistor | |

## 1.7. Accessories

PRINTING

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| | YGFM282973 | Operating instructions | |

INSTALLATION PARTS

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| | YEAJ02764 | Power Cord | |
| | YEAA33144 | Antenna Accessory | |
| | CR2025/1F | Battery (CQ-RD320LEN) | |
| | YEFX0214198 | Mounting Collar | |
| | YEFA131290 | Removable Face plate Case | |
| | YEFX9991721 | Unlock Key | |
| | YEFX9991526A | Remote Controller (CQ-RD320LEN) | |
| | YEJV01060 | Bolt, 5mm * 8mm | |

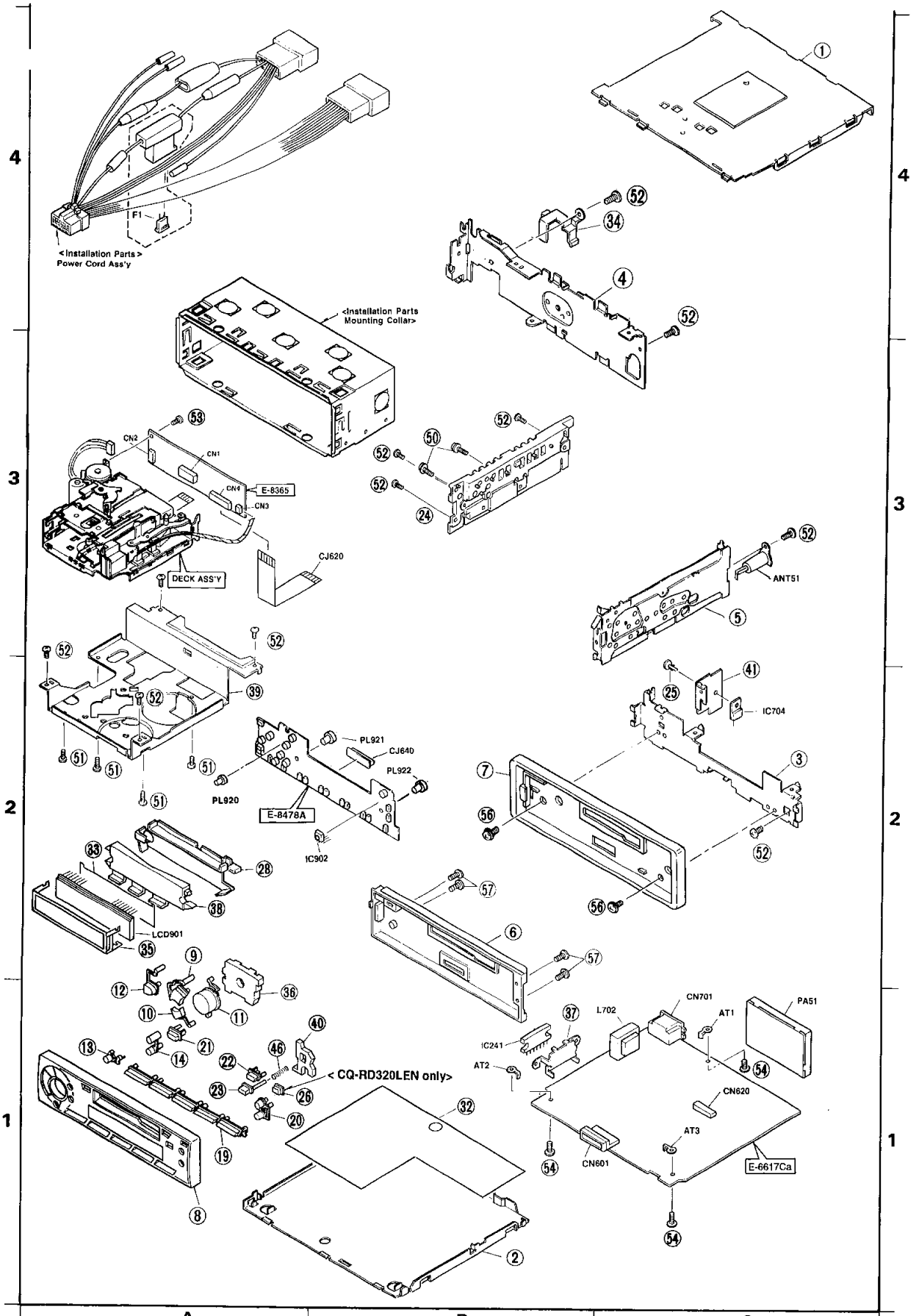
## 1.8. Mechanical Parts

MISCELLANEOUS

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| F1 ⚠ | YEAF02015 | Fuse, 15A | |
| ANT51 | YEAA10090 | Antenna Receptacle | |
| AT1-3 | YEAT03420 | Terminal | |
| 1 | YEFA031354D | Upper Cover | (4-C) |
| 2 | YEFA05594B | Bottom Cover | (1-B) |
| 3 | YEFA07394 | Front Plate | (2-C) |
| 4 | YEFA08401AK | Rear Plate | (3-C) |
| 5 | YEFA09505 | Side Plate | (3-C) |
| 6 | YEFA131360 | Cover, Detachable | (2-B) |
| 7 | YGFC025254A | Escutcheon Ass'y, Unit | (2-C) |
| 8 | | Escutcheon Ass'y, Detachable | (1-A) |
| | YEFC026238 | (CQ-RD320LEN) | |
| | YEFC026179 | (CQ-RD310LEN) | |
| 9 | YEFE135150 | Button, VOL UP | (1-A) |
| 10 | YEFE135151 | Button, VOL DOWN | (1-A) |
| 11 | YEFE135152 | Button, MODE/BAND | (1-A) |
| 12 | YEFE135155 | Button, SEL | (1-A) |
| 13 | YEFE135156 | Button, PWR | (1-A) |
| 14 | YEFE137746 | Button, ATT/LOUD | (1-A) |
| 19 | YEFE135160 | Button, PRESET | (1-A) |
| 20 | YEFE134705 | Button, DISP/P | (1-A) |
| 21 | YEFE134683 | Button, PROG | (1-A) |
| 22 | YEFE134684 | Button, EJECT | (1-A) |
| 23 | YEFE134685 | Button, RLSE | (1-A) |
| 24 | YEFF01832C | Heat Sink | (3-B) |
| 25 | YEFJ05030 | Color Rivet | (2-C) |
| 26 | YGFJ011336 | Ornament Plate (CQ-RD320LEN) | (1-A) |
| 28 | YGFK06748 | Holder, LCD | (2-A) |
| 32 | YEFV011813 | Insulator | (1-B) |
| 33 | YEFV021486 | Optical Shade, LCD | (2-A) |
| 34 | YEFX0213649A | Bracket, CN701 | (3-C) |
| 35 | YEFX0214173 | Bracket, LCD | (2-A) |
| 36 | YEFX0011809 | Transparent Plate | (1-A) |
| 37 | YEFX0213945B | Bracket, IC241 | (1-B) |
| 38 | YGFX0011734A | Transparent Plate | (2-A) |
| 39 | YEFX0214197B | Bracket, Deck | (2-A) |
| 40 | YGFX0011736 | Transparent Plate | (1-A) |
| 41 | YEFX0214167 | Bracket | (2-C) |
| 46 | YEFX0052153 | Spring | (1-A) |
| 50 | YEJS06092 | Screw, 3mm * 10mm | |
| 51 | YEJS03022 | Screw, 3mm * 3mm | |
| 52 | XTB3+6FFX | Tapping Screw, 3mm * 6mm | |
| 53 | YEJT03163 | Tapping Screw, 2mm * 6mm | |
| 54 | YEJT03009 | Tapping Screw, 3mm * 8mm | |
| 56 | YGJT03156 | Tapping Screw, 2.6mm * 5mm | |
| 57 | XTN2+8GFZ | Tapping Screw, 2mm * 8mm | |

# EXPLODED VIEW (Unit)

■ Numbers in ◯ are indicated REF.NO. in the REPLACEMENT PARTS LIST



# 2 Tape Player Parts

MISCELLANEOUS

| Ref. No. | Part No. | Part Name & Description | Remarks |
|---|---|---|---|
| 1 | YESFA01055 | Chassis Rivet Ass'y | (2-B) |
| 4 | YESFX046056 | Main Plate | (1-C) |
| 5 | YESFX003049 | B Gear | (2-B) |
| 6 | YESFX003050 | C Gear | (2-A) |
| 7 | YESFX003051 | D Gear | (1-B) |
| 8 | YESFX003052 | P Gear | (2-B) |
| 9 | YESFX003053 | P.G Plate | (2-A)<br>(3-B) |
| 10 | YESFG02021 | Guide BKT | (2-C) |
| 11 | YESFX026013 | Middle Pulley | (2-B) |
| 15 | YESFX046057 | Head Panel Ass'y | (2-C) |
| 16 | YESAH006 | P.Head P-5544SD-9949 | (2-C) |
| 17 | YESFX046058 | Head SP Plate | (2-C) |
| 20 | YESFX046059 | O.P Plate Ass'y | (1-B) |
| 21 | YESFX215015 | Eject Lever Rivet Ass'y | (3-A) |
| 22 | YESFX046060 | S.B Plate Rivet Ass'y | (1-C) |
| 23 | YESFX046061 | O.P Plate Holder | (3-A) |
| 26 | YESFX003054 | FR Gear | (1-B) |
| 27 | YESFX046062 | FR Plate | (1-A) |
| 30 | YESFX218011 | Pinch Roller Arm (F) Ass'y | (3-C) |
| 31 | YESFX218012 | Pinch Roller Arm (R) Ass'y | (2-C) |
| 32 | YESFX046063 | SW Actuator B | (3-C) |
| 33 | YESFX005088 | SA Spring M | (3-C) |
| 36 | YESFX209007 | Reel Ass'y | (2-A)<br>(3-B) |
| 37 | YESFX005074 | B.Tension Spring (F) | (2-A)<br>(3-B) |
| 40 | YESAK01013 | Sub Motor Ass'y | (4-A) |
| 43 | YESAK01014 | Main Motor Ass'y | (4-A) |
| 44 | YESAE283 | M Conector Ass'y | (4-A) |
| 45 | YESFX006002 | Wire Clamper | (3-A) |
| 48 | YESFX213004 | FL Capstan Ass'y | (1-B) |
| 49 | YEFSFR03003 | Main Belt | (1-B) |
| 52 | YESFX046064 | Case Lifter | (4-B) |
| 53 | YESFX239006 | Cassette Case | (3-B) |
| 54 | YESFS04007 | Cusion Rubber | (3-B) |
| 56 | YESFX046065 | P.S Actuator Plate | (4-B) |
| 57 | YESFX005075 | P.S Spring | (4-B) |
| 58 | YESFX046066 | Pack Slider | (4-B) |
| 61 | YESAP151 | Reel PWB Ass'y | (2-A) |
| 200 | YESJS01090 | Camera Screw (Tams) 2.0×2.2 | (1-A) |
| 201 | YESJW01019 | Lumilar Washer (Cut) 1.55×3.5×0.5 | (3-A)<br>(3-B) |
| 202 | YEJS01070 | Adjust Screw 2.0×13 | (2-C) |
| 203 | YEFT03084 | Camera Tapping Screw S 2.0×3.0 | (3-A)<br>(4-B) |
| 204 | YEJS06130 | Tams Screw 2.0×3.0 | (3-A) |
| 205 | YEJW05130 | P.Washer (Cut) 0.85×2.8×0.25 | (2-B) |
| 206 | YESJW01012 | P.Washer (Cut) 1.55×3.5×0.5 | (2-A)<br>(3-C) |
| 207 | YESJW01013 | P.Washer 2.1×3.5×0.2 | (2-A)<br>(3-C) |
| 208 | YESJW01014 | Lumilar Washer 2.1×3.5×0.1 | (1-B) |
| 209 | YESJS01091 | PK Collar Screw A | (1-C) |

# EXPLODED VIEW (Tape Deck)

■ Numbers in ○ are indicated REF.NO. in the REPLACEMENT PARTS LIST